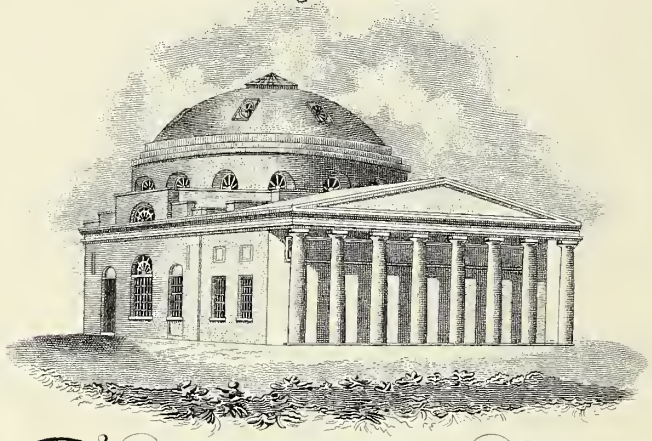
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SYPHILIS: GENERAL CONSIDERATIONS AND A METHOD OF TREATMENT

Charles C. Dennie, M. D.*
and
Frank X. Dwyer, M. D.**
Kansas City, Missouri

The control of syphilis is dependent upon two factors: case finding and case treatment. Greater emphasis must be placed on the former before a substantial decrease in the incidence of syphilis can be accomplished. Syphilis can, and often does, imitate a variety of other diseases. Physicians must be trained to employ routine serological tests to a greater extent in the future than has been practiced in the past. The physician must be able to recognize the typical lesions of syphilis. He must determine by serological tests the presence of the disease when diagnostic lesions are not present. The vast number of syphilitics discovered by routine preinduction serological tests during the past war should serve to stimulate physicians to be on the lookout for syphilis in all patients, regardless of race, color, financial or social status.

The purpose of this article is to present the common diagnostic criteria by which syphilis can be recognized and to raise the index of suspicion toward those cases which are not clinically diagnosable as well as to outline the general methods of treatment as used at the present time in the Department of Dermatology and Syphilology of The University of Kansas Hospitals.

Genital or extragenital lesions caused by Treponema pallidum are classified as primary syphilis. Secondary syphilis causes generalized skin eruptions, mucosal lesions, loss of hair, iritis, neuroretenitis and bone and joint symptoms. All of these syphilitic manifestations are readily confused with many other diseases. Any disease with which syphilis might be confused must be differentiated by a darkfield examination and/or serological tests.

Latent syphilis, also known as "hidden syphilis," begins with the healing (spontaneous or under the influence of inadequate treatment) or early syphilis and extends for a variable period of time, ranging from a few months to a lifetime. Latent syphilis is not recognized clinically, the diagnosis being made only by serological tests. Modern serological tests are over 90 per cent efficient in the diagnosis of latency. The diagnosis of latent syphilis is untenable unless a cerebrospinal fluid examination, an x-ray and fluoroscopic examination of the heart and aorta and an adequate ocular examination have been performed and found to be normal.

Late syphilis may attack any part of the body, but 95 per cent of all patients with late syphilis develop lesions in one or more of seven systems:

1—The mucocutaneous structures
2—The bones and joints
3—The heart and aorta
4—The eye
5—The nervous system
6—The auditory and other cranial nerves
7—The viscera, especially the liver.

(1) The Mucocutaneous Structures

Late syphilids are characterized by asymmetry, the presence of a single or few lesions, induration, low-grade inflammation, indolence, annular, polycyclic borders, forming segments of circles in individual lesions or groups of lesions, sharp marginations (the punched-out ulcer appearance), tissue destruction and replacement with or without ulceration, central or one-sided healing with peripheral extension, superficial, atrophic, noncontractile scar and persistent peripheral hyperpigmentation. Many diseases of the skin possess one or more of these characteristics and can be easily mistaken for syphilis; however, modern serological tests are 95 per cent efficient in untreated late syphilis of the somatic system.

*Professor of Dermatology, University of Kansas School of Medicine, Kansas City, Kansas.
**Resident in Dermatology, University of Kansas School of Medicine. Kansas City, Kansas.

(2) Late Osseous Syphilis

Syphilitic osteitis, periostitis, gumma of bone, etc., are very confusing, but here again diagnostic difficulty will be solved in 95 per cent of the cases by the use of x-ray and routine serological tests.

(3) Cardiovascular Syphilis

Therapeutic hope in cardiovascular syphilis lies in the recognition of the lesion in the stage of uncomplicated aortitis before the development of aortic regurgitation or aneurysm. While uncomplicated aortitis is often not readily recognizable clinically, a considerable proportion may be diagnosed on the basis of

1—X-ray and fluoroscopic evidence of aortic dilatation, especially if localized to the ascending aorta

2—Increased retromanubrial dullness

3—History of circulatory embarrassment, especially exertional dyspnea with or without progressive cardiac failure

4—Tympanic, bell-like quality to the second aortic sound

5—Rough systolic aortic murmur, usually transmitted upward

6—Substernal, less frequently precordial, dull, aching pain, usually without radiation or relation to exercise

7—Paroxysmal dyspnea, not exertional and usually nocturnal

8—Later, the classic signs of aortic regurgitation, the early, blowing disatolic murmur heard marginally along the left border of the sternum, often a systolic aortic murmur, a collapsing pulse (Corrigan's water-hammer pulse), a double murmur in the great vessels when compressed (Duroziez's sign), a visible capillary pulsation and a high pulse pressure may be found.

9—Marked disparity between systolic and diastolic blood pressures where there is aortic regurgitation.

Uncomplicated aortitis and even advanced syphilitic cardiovascular disease may be present without symptoms or chest pains. This finding is especially true in negroes.

(4) Late Ocular Syphilis

The common lesions of late syphilis of the eye are keratoiritis, neuroretinitis, chorioretinitis and optic atrophy (primary, secondary or retrobulbar.) These lesions are not distinctly syphilitic, resembling lesions due to many other diseases. Evidences of syphilitic involvement elsewhere in the body and a positive serological test are diagnostic. A critical examination of the eye grounds is all important, especially in the congenital syphilitic.

(5) Syphilis of the Nervous System

Diagnostic confusion between syphilis of the central nervous system and other diseases is common. Diagnostic errors are particularly disastrous to the individual patient. History, physical examination, blood serological tests and examination of the cerebrospinal fluid will minimize these errors.

(6) Syphilis of the Auditory and Other Cranial Nerves

Involvement of the auditory nerve may occur with any type of neurosyphilis or may occur without other neuro-axis involvement, as is often the case in congenital syphilis. Either the cochlear or vestibular branches may be affected alone, or the entire nerve may be involved. Vertigo, nausea, vomiting, faintness, etc., whether accompanied by deafness or not, should arouse suspicion and employment of serological tests.

(7) Syphilis of the Viscera

Here again such diseases as cirrhosis, carcinoma, hepatitis, hepatomegaly from mycardial failure, cholecystitis, cholelithiasis, Hodgkin's disease, sarcoidosis, hepatic abscess, tuberculous peritonitis, etc., may confuse the physician, but serological tests and response to the iodides may often confirm the diagnosis.

CLASSIFICATION OF SYPHILITIC STATES

1—Early Syphilis

A—Seronegative Primary—diagnosed by darkfield examination, usually in the first three weeks

B—Seropositive Primary—usually diagnosed in the second week to the second month

C—Seropositive Eruption

(1) Early (2nd month—6th month)

(2) Late (6th month—3rd year)

D—Early Latent—asymptomatic, positive serology, of less than four years' duration

2—Late Latent Syphilis

Intermediary stage between early and late syphilis —implies positive blood serological reaction, normal ocular, cardiovascular and spinal fluid examinations, asymptomatic, of over four years' duration

3—Late Syphilis

A—Late Skin Manifestations

B—Neurosyphilis

(1) Meningeal Neurosyphilis, almost always an early manifestation, occurring within the first two years of the infection, includes

acute syphilitic meningitis

early asymptomatic neurosyphilis.

(2) Vascular Neurosyphilis may occur early or late, usually the latter—localized or widespread syphilitic cerebral endarteritis, sometimes with but often without meningeal or parenchymatous involvement; frequently in association with cardiovascular syphilis; causes cerebrovascular accidents, hemiplegias, monoplegias, subarachnoid hemorrhages, etc.

(3) Diffuse Meningovascular Syphilis

(4) Parenchymatous Neurosyphilis

a—Paresis

b—Tabes dorsalis
c—Taboparesis
d—Primary optic atrophy

In meningeal, vascular and diffuse meningovascular neurosyphilis the inflammatory element predominates, while in parencymatous neurosyphilis the degenerative element is predominant. Treatment efforts are more successful in proportion to the extent to which inflammatory changes predominate over degenerative or fibrotic lesions.

C—Cardiovascular Syphilis

(1) Early-aortitis without symptoms or physical signs

(2) Late

a—Diffuse and primary supravalvular involvement of the aorta, resulting in uncomplicated aortitis with or without diffuse dilatation

b—Less localized destruction of elastic tissue anywhere in the aortic wall (usually ascending aorta) with resulting aneurysm

c—Valvular involvement with subsequent distortion and valvular incompetency, with mechanical effects apparent in the heart and peripheral vessels

d—Progressive heart failure due to myocardial ischemia, produced by stenosing lesions of the coronary ostium without accompanying valvular disease

e—Syphilitic myocarditis—a rare complication

D—Benign (Osseous-Mucocutaneous) Late Syphilis

periostitis, osteomyelitis, osteitis, arthritis, gumma of bone or muscle, synovitis and late syphilids

E—Syphilis of Viscera

Larynx, trachea, bronchi, lungs, mediastinum, stomach, liver, spleen, rectum, kidneys, pancreas, testes and bladder are most common sites of involvement.

PRINCIPLES OF TREATMENT

A complete and thorough physical examination must be made before treatment is instituted. The type of treatment employed is dependent on the organ or system involved. Complicating diseases, which are often present, must be discovered and treated. Tuberculosis, nephritis, diabetes, hypertension, arteriosclerosis and others necessitate special treatment and precautions. A complete and thorough physical examination establishes a very necessary base line, from which the response to treatment can be measured. Records of cardiac measurement, blood pressure, the equality, regularity and reacting properties of the pupils, of reflexes, of the color of the optic discs, etc., at the time of the original examination are necessary to interpret such changes as may appear later. Thus, it can be seen that each latent or late case should have recorded a careful eye examination, including visual fields and eye grounds, x-ray and fluoroscopic examination of heart and aorta and spinal fluid examination in addition to a complete physical examination. In the examination of the spinal fluid it is imperative that the Wassermann reaction, total protein, globulin, colloidal gold and cell count be tabulated.

Clinical manifestations of early syphilis disappear about the time therapy is completed when penicillin is used. This is true to a less marked degree in late syphilis. The most reliable criterion, especially in early syphilis, with which to measure the effectiveness of treatment is a measurement of the reagin content of the blood; therefore, quantitative serological tests should be employed in all patients with syphilis before, during and after termination of treatment. A continuing index of reagin content is one of the most valuable controls in following the course of the disease. Spinal fluid quantitative serological tests are likewise important in the interpretation of response to treatment in cases of neurosyphilis. We routinely used the Kolmer, Wassermann and Kahn tests for blood quantitative studies and the former alone when testing cerebrospinal fluid. The quantitative serological examinations are reported in units according to the following formula:

(Kolmer test)

$N = 4D$

D = highest dilution giving at least a 2 plus reaction

N = number of units of reagin.

For example:

dilution	0	2	4	8	16	32	64	128
reaction	4	4	4	4	3	2	0	0

Here the highest dilution giving at least a two plus reaction is 32, and $4 \times 32 = 128$, the number of units reported. It is important that laboratories performing quantitative Kolmers set up the test with at least seven tubes, so that the full range of dilutions showing two plus or more can be reported.

At the present time, with the addition of penicillin to the therapy of syphilis and with the changing characteristics of commercial penicillin, it is impossible to outline a method of treatment utilizing penicillin that gives positive assurance of withstanding the test of time. Although penicillin is effective in both early and late syphilis, the use of penicillin alone in doses of 1.2 to 2.4 million units over a period of four to eight days reveals an incidence of treatment failures equaling, and perhaps exceeding, that obtained with combined arsenoxide-bismuth therapy. Efforts have been made recently to enhance the therapeutic effect of penicillin, notably by the U. S. Public Health Service in its rapid-treatment centers, by using other antisyphilic drugs in con-

junction with penicillin. It has been found that moderate doses of bismuth and arsenoxide used in conjunction with penicillin are far more effective than even large doses of arsenoxide used without bismuth or large doses of bismuth without arsenoxide. The two drugs used together with penicillin have been found to be so much more effective than either alone that a synergistic rather than merely additive effect is suggested. Consequently, the treatment schedule used in our department utilizes all three antisyphilic drugs, and the dosage used is purely arbitrary—high enough so that we feel it is entirely adequate and low enough to be financially practical. When using penicillin, it must be remembered that reactions are not infrequent and may be serious. Herxheimer effects may be avoided by reducing the dosage when initiating treatment and graduating it to the desired level during the first two or three days. This is especially important in cariovascular and neurosyphilis.

RESPONSIBLE FACTORS FOR SUCCESSFUL TREATMENT

Immunity plays one of the largest parts in the successful treatment of syphilis of any kind. Bruusgaard and also one of us (Dennie) have shown that, roughly, 25 per cent of all syphilitics spontaneously cure themselves. This phenomenon is due to the natural high titre of immunological substances in the human body. Twenty-five per cent more have such a mild syphilis that they only show positive serological reactions. Those individuals respond to a minimum amount of adequate treatment. Twenty-five per cent more have a moderately severe syphilitic disease, which will respond to sufficient treatment. The remaining 25 per cent are resistant to treatment. It may be that the addition of penicillin to the treatment of syphilis will change these figures. That remains to be seen. We regard malignant early syphilis arsenical fastness and penicillin recurrences as not due to the inefficiency of the drugs but due directly to the low immunological titre. Experimental work has been done by one of us (Dennie) to show that this is true. Nonspecific therapy thus becomes a MUST in the treatment of all syphilitic recurrences, whether early or late. The immune forces of the body toward syphilis can be raised in most instances by the use of malaria, heat cabinet or the hot bath. In cases of this kind, the therapist should not hesitate to use these measures in conjunction with penicillin, bismuth and the arsenicals as well as the iodides.

The pathological changes in syphilis are divided into four stages:

1—The stage of invasion
2—The stage of infiltration
3—The stage of resolution
4—The stage of cicatrization.

It naturally follows that the stage of invasion is the golden time for the therapeutist to eliminate the disease by intensive treatment. In this group the types that are especially susceptible to this method are:

(1) Seronegative primary syphilis
(2) Paresis sine paresi
(3) Beginning tabes dorsalis
(4) Early aortitis without symptoms.

The stage of infiltration represents that type of syphilis which has seated itself in the body strong enough to cause the reticulo-endothelial system to react. It has permeated all parts of the body. At this time the nature of the subsequent disease is determined. For example, if the patient will in later years have aortic disease, the Spirochaetae pallidae are implanted in the aorta at this time. The chances for cure in the infiltrated type of syphilis are still good but not nearly so good as in the invasive type.

The stage of resolution and the stage of cicatrization represent an era in the course of syphilis in which fibrous tissue is being formed or has formed. The inevitable marks of syphilis will always be with these individuals, even though they have been ridded of the disease. One can only hope by treatment to prevent further progression and to heal sick tissues.

METHODS OF TREATMENT

Seronegative Primary

This is the type of syphilis that responds best to penicillin arsenoxide-bismuth treatment. The ideal method of treatment requires hospitalization.

Treatment Schedule: (Table I)

days 1-10 penicillin, 6,000,000 units
arsenoxide, 0.04-0.06 gram every other day
bismuth subsalicylate, 0.2 gram once weekly

Follow immediately with

arsenoxide, 0.04-0.06 gram twice weekly for 10-12 weeks
bismuth subsalicylate, 0.2 gram once weekly during entire course
bismuth, 0.2 gram weekly for 10 weeks more.

Check the serological reaction at the end of the arsenoxide-bismuth course and before the final bismuth. If reagin should be present in any amount, give the 32-week treatment mentioned as the alternate to treatment without penicillin; i.e., penicillin plus 32 weeks' treatment.

In all other early cases—seropositive primary, eruptive early syphilis and early latency—the penicillin treatment is to be followed by 32 weeks of treatment.

Alternates:

If the patient cannot be hospitalized:

(a) The patient or his family can be instructed how to give the penicillin at home.

(b) 300,000 units of penicillin in beeswax can

be given in the office or clinic morning and evening for 10-12 days. The arsenoxide-bismuth treatment is to be given at the same time.

After the course is finished, check the serological reactions at the end of 1-2-3-6 months and 1-2-3 to 5 years.

If the penicillin treatment is impractical and the patient has early or early latent syphilis, a 32-week schedule of arsenoxide and bismuth subsalicylate is initiated, consisting of two courses of arsenoxide, 0.04-0.06 gram twice weekly for ten weeks, separated by a weekly injection of bismuth subsalicylate, 0.2 gram, for eight injections, the bismuth overlapping the last and first weeks of arsenoxide therapy, and terminating with a weekly injection of bismuth subsalicylate, 0.2 gram, for ten weeks.

Schedule: (Table II)

weeks 1-10 arsenoxide, 0.04-0.06 gram twice weekly
weeks 9-16 bismuth subsalicylate, 0.2 gram once weekly
weeks 15-24 arsenoxide, 0.04-0.06 gram twice weekly
weeks 23-32 bismuth subsalicylate, 0.2 gram once weekly

Total Treatment:

40 injections of arsenoxide
20 injections of bismuth

Total Time:

32 weeks

If the serological tests are negative at the end of this period, the patient is placed on probation and instructed to return to the clinic at the end of one, three and six months and one, two, three and five years. In the event the serological tests have remained the same or increased, the patient is urged to submit to the penicillin arsenoxide-bismuth course of 21 weeks, as outlined above. If this is still impossible, the course is repeated after a short (1-2 months) rest period. If the serological titre has decreased appreciably after one course of treatment, the patient is either probated with monthly quantitative serological checks, or the course is reinstated at once and followed through until one year of treatment has been given, at which time the patient is re-examined, including an examination of the spinal fluid. In the event the above schedule fails to produce seronegativity, penicillin and heat therapy is recommended.

Late Latent Syphilis

Our schedule for late latent syphilis begins with sodium iodide, 2.0 grams twice weekly, and bismuth subsalicylate, 0.2 gram once weekly, for a total of 3-6 weeks, with a moderate dosage (10 drops three times daily) of potassium iodide by mouth. Then, if practical, the 21-week treatment of penicillin, arsenoxide and bismuth is instituted. A gradually increasing dosage is employed. If this is not possible and the patient is moderately young and in good health, the 32-week course of 40 injections of arsenoxide and 32 injections of bismuth is instituted. In elderly patients (50 years) and those in poor health, the iodide-bismuth therapy is followed by alternate weekly courses of arsenoxide and bismuth, with relatively more bismuth and less arsenoxide—a total of 28 injections of arsenoxide and 32 injections of bismuth over a period of 52 weeks.

Schedule:

weeks 1-8 arsenoxide, 0.04-0.06 gram twice weekly
weeks 7-15 bismuth subsalicylate, 0.2 gram once weekly
weeks 14-23 arsenoxide, 0.04-0.06 gram twice weekly
weeks 22-32 bismuth subsalicylate, 0.2 gram once weekly
weeks 32-41 arsenoxide, 0.04-0-06 gram twice weekly
weeks 40-52 bismuth subsalicylate, 0.02 gram once weekly

At the end of this course a complete and thorough physical examination, quantitative blood serological tests and a spinal fluid examination are repeated. If the patient is seronegative and asymptomatic, he is placed on probation with periodic checks, as outlined above. If the patient is still seropositive, he is urged to take the penicillin-bismuth arsenoxide routine, or, as a second choice, the former course is repeated. If at the end of either of these schedules the patient is still seropositive and the reagin titre remains stationary, future treatment is left to the discretion of the experienced therapist to avoid the possibility of overtreatment. It is in cases such as these that heat therapy is indicated.

RECURRENCES—EARLY SYPHILIS FOLLOWING PENICILLIN THERAPY

The treatment of recurrences in early syphilis following rapid treatment with penicillin is a problem frequently encountered at present. According to recent U. S. Public Health reports, over 13 per cent of 8,000 patients treated by various methods of rapid therapy routine were retreated as failures. A small percentage of these were undoubtedly reinfections, but the great majority were clinical or serological relapses. It is our belief that, although penicillin is a marvelous spirocheticide and a very valuable adjunct in the treatment of syphilis, it does not stimulate the reticuloendothelial system or defense mechanism of the body, and in cases of relapse following penicillin therapy, heat, in the form of malaria, cabinet, typhoid or hot baths, is indicated. This is also true for neurorecurrences. In central nervous system syphilis penicillin is an active thera-

peutic agent. Its greatest effect on symptoms and signs occurs in mental breaks, incoordination, tremors and speech defects of paretics and in the lightning pains of tabetics. Destructive lesions, such as shown by fixed pupils, absent reflexes, etc., do not improve. Spinal fluid abnormalities are particularly responsive to penicillin, especially asymptomatic neurosyphilitics—the least on paretics.

CARDIOVASCULAR SYPHILIS—STAGE I—UNCOMPLICATED AORTITIS

The treatment of choice for patients with uncomplicated aortitis consists of 6,000,000 units of penicillin (100,000 units* every three hours for eight days), preceded by 6-8 weekly injections of bismuth subsalicylate, 0.2 gram, combined with small, graduated doses of arsenoxide and full doses of bismuth for 20 weeks, as outlined in the treatment of early syphilis. If the patient is intolerant to arsenoxide, we substitute bismarsen, 0.1-0.2 gram weekly, during and following the penicillin. If this schedule is impractical, the patient is placed on alternate weekly injections of bismuth, 0.2 gram, for 12 weeks and weekly injections of arsenoxide in graduated doses of 0.04-0.06 gram for eight to ten weeks, with overlapping of the last injection of bismuth and the first injection of arsenoxide and the last injection of arsenoxide and the first injection of bismuth of each course. Potassium iodide, 10-30 drops three times a day, is given throughout, and the treatment is carried through for at least one year, at which time the base line physical examination (heart, aorta, eye and spinal fluid) is rechecked. During this treatment the heart is rechecked at frequent intervals and a careful watch for insufficiency is maintained. The above course should be repeated, with rest, if necessary, after the bismuth. The patient is then followed periodically with an occasional course of treatment (once a year)—a course of bismarsen, 0.2 gram weekly for ten weeks. Here again there is a tendency to overtreat, and the decision is left to the experienced therapist.

CARDIOVASCULAR SYPHILIS—STAGE II—ANEURYSM OR AORTIC REGURGITATION

The treatment of patients with aortic aneurysm and/or regurgitation in the absence of congestive heart failure involves danger, and the results are often disappointing. General medical care, rest, restriction of physical activity, digitalis when needed and nitroglycerin and theobromine derivatives for pain demand attention. It is especially important to avoid Herxheimer's reactions, and this is best done by initiating treatment with bismuth and iodides and continuing for 8-12 weeks before attempting penicillin or arsenicals. Treatment should be mild, prolonged and continuous. We consider penicillin in graduated doses to a total of 6,000,000 units combined with ten weekly injections of bismarsen, 0.1 to 0.2 gram, to be the treatment of choice. A rest of one month is followed by 10 additional weekly injections of bismarsen. The patient is then retreated at 10-week intervals with from five to ten injections of bismarsen for at least one year. Intravenous injections of arsenicals must be used with great caution. Potassium iodide, 10-30 drops three times a day, is used the first four months and during the bismarsen courses thereafter.

Schedule:

1—0.1-0.2 gram bismarsen, intramuscularly, weekly for 10 weeks
2—Rest 1 month
3—Repeat the 10-week treatment
4—Rest 10 weeks, then give 5 to 10 weeks' treatment—until 1 to 3 years' treatment is given
5—Saturated solution of potassium iodide, 10 to 30 drops 3 times a day, throughout the course.

The intravenous injection of arsenic is contraindicated.

CARDIOVASCULAR SYPHILIS—STAGE III—CONGESTIVE HEART FAILURE

The treatment of cardiovascular syphilis with congestive heart failure consists of hospitalization and digitalization, with potassium iodide only, until compensation is regained. Then, bismuth sodium tartrate is given every 3-4 days for 4-8 doses, followed by bismuth subsalicylate, 0.2 gram, weekly for twelve weeks, after which bismarsen, 0.1 to 0.2 gram, is given, being careful to avoid a Herxheimer's reaction. If tolerant, the patient is allowed to rest for six weeks to two months, then weekly injections of bismarsen are resumed for six to ten doses. This treatment is continued for a year to eighteen months, and any further treatment is left to the judgment of the experienced therapist. Potassium iodide, 10-30 drops three times a day, is used throughout with very frequent cardiac examinations.

BENIGN (OSSEOUS MUCOCUTANEOUS) LATE SYPHILIS

The ideal treatment for benign (osseous-mucocutaneous) late syphilis consists in hospitalization for 6,000,000 units of penicillin combined with arsenoxide, 0.02-0.06 gram, every other day and bismuth, 0.2 gram, on the first and last days, followed by alternate courses of bismuth subsalicylate (8-12 weekly injections) and arsenoxide, 0.04-0.06 gram, (6-12 weekly injections) for two years. Iodides are used throughout.

NEUROSYPHILIS—EARLY PARESIS—MINIMAL NEUROSYPHILIS—MINIMAL VASCULAR NEUROSYPHILIS

GENERAL CONSIDERATIONS IN TREATMENT

Asymptomatic neurosyphilis and paresis sine paresi, before the advent of penicillin, responded in 50 per cent of the cases to one year of treatment

*Start with 20,000 units and increase each dose by 20,000 units until 100,000 units have been given. This procedure is used to avoid a Herxheimer's reaction.

with neoarsphenamine, bismuth and the iodides. Since the advent of penicillin, we advise this same course of treatment together with penicillin and 2-4 sustained hyperpyrexia treatments, in which the patient is kept in the cabinet from 2-4 hours at a temperature of 105°F-106°F. Where it is impossible to secure heat treatments, the hot bath can be used. The course of treatment would be the same as that used in seronegative primary syphilis.

Acute paresis and acute tabes, on the other hand, require some preliminary treatment to prepare them for malaria or hyperpyrexia, especially if they have had no previous treatment. It has been found that serious results, even death, occur four times more frequently in these patients when preliminary treatment has not been used. About three weeks of treatment with sodium iodide, 2.0 grams, intravenously. and soluble bismuth, 2.0 grams, should be used before the institution of nonspecific therapy.

It is almost unnecessary to say that before the institution of nonspecific therapy, a complete physical examination should be made, which includes a spinal puncture, chest examination, eye ground examination, blood pressure reading (above 150 is dangerous), urine examination, blood chemistry, nonprotein nitrogen, urea nitrogen, sugar and hemoglobin estimation and a history of sensitivity to quinine, if malaria is used. Malaria, tertian or quartan, should be used. We prefer the quartan because of the fact that the rise of temperature remains above 104°F for a much longer period than the tertian, and the patient has time enough between bouts to recover from the previous one. A total of 40 hours of fever above 104°F is desirable. Patients should not be exhausted by this treatment. If the blood pressure begins to fall alarmingly, anemia develops suddenly, the spleen enlarges rapidly or the temperature rises above 106.5°F, measures should be taken to control the malaria. It may have to be terminated, but usually the height of temperature can be conrolled by one or two injections of thiobismol. Supportive treatment should be given with the malaria in the form of assimilable iron by mouth, injections of crude liver and a high protein and carbohydrate diet.

HYPERPYREXIA

If for any reason malaria cannot be used, cabinet heat should be substituted. The same contraindications occur here as in malaria. There is only one difference, and that is that the regulative heat center is more likely to be thrown out of kilter by the use of hyperpyrexia. In nearly all instances this accident can be prevented by close observation of the patient. If the patient's temperature rises too suddenly and keeps on rising after he has been removed from the cabinet or the heat has been turned off, to the peak of 107°F, this treatment should not be repeated.

Treatment of choice for early paresis, paresis sine paresi, minimal neurosyphilis-asymptomatic with minor fluid changes or minor neurological signs with normal spinal fluid, vascular neurosyphilis without aortitis:

21 weeks of penicillin-arsenoxide-bismuth regime (TABLE I)

32 weeks of arsenoxide-bismuth therapy (TABLE II)

Alternate course without penicillin:

32 weeks of arsenoxide-bismuth treatment, holding to the overlapping of the bismuth and arsenoxide

If there is no or only slight serological or clinical improvement, nonspecific methods should be used:

1—Malaria (tertian or quartan), 40 hours or more of temperature rise above 104°F

Penicillin, 6,000,000 to 10,000,000 units

2—Heat cabinet, 40 to 60 hours of temperature rise above 104°F (105°F-106.2°F sought)

Penicillin, 6,000,000 to 10,000,000 units

Arsenoxide, 5 doses

Bismuth, 2 doses

If still not conquered, add tryparsamide and bismuth after one month's rest:

20 weekly doses of tryparsamide, 2.0 grams

10 weekly doses of bismuth, 0.2 gram.

Examine spinal fluid and, if not satisfactory, repeat tryparsamide regime.

The eye grounds are to be examined before and after the first, third, fifth and tenth doses.

Neurosyphilis—Stage of Late Paresis

The treatment of late paresis (symptomatic with or without marked paretic gold curve or asymptomatic with marked gold curve) requires hospitalization after intensive preliminary treatment with iodides and bismuth (2-8 doses). Hospital routine calls for fever therapy and penicillin, 6,000,000 to 10,000,000 units. Malaria is the preferred form of fever to be used in these cases. If fever therapy cannot be undertaken at once, tryparsamide is used to fill the interim. The penicillin-fever combination is followed by alternate courses of tryparsamide (20) and bismuth subsalicylate (20) to a total of 40 of each. The spinal fluid is reexamined every six months, and further treatment (involving arsenoxide, bismuth, tryparsamide or fever) is dependent on these findings. Potassium iodide, by mouth, is continued throughout. Visual fields of eye grounds are checked during tryparsamide therapy, as outlined above.

Neurosyphilis—Stage of Tabes Dorsalis

Tabes dorsalis therapy is determined from three standpoints:

1—The desirability in certain cases of giving treatment or withholding it

2—The probable results obtainable

3—The relief of particular symptoms by special therapeutic methods.

In approximately 10 per cent of tabetics spontaneous arrest occurs. Symptoms may disappear, regress or remain in status quo for many years or indefinitely. This is the syndrome of so-called "burnt out" tabes. In these cases treatment occasionally stirs up dormant symptoms and actually promotes rather than checks progress. Treatment and its type in these cases should be based more on possible evidences of syphilis outside the central nervous system rather than on the neurological lesions. If given at all, treatment should be mild, tonic and prolonged (arsenoxide and bismuth with potassium iodide in moderate dosage only). In the remaining 90 per cent of tabetics treatment is obligatory either for relief of symptoms or arrest of progress, and the type of therapy depends partly on the patient's general physical condition and partly on whether he suffers from either one or two particular manifestations of the disease, primary optic atrophy or gastric crises.

The treatment of choice in tabes without optic atrophy or gastric crises and without well-marked cardiovascular syphilis is penicillin, 6,000,000 to 8,000,000 units, combined with bismuth subsalicylate, 0.2 grams every five days, and 3-10 cabinet fever treatments of moderate intensity, followed by bismuth subsalicylate, 0.2 gram weekly for 10-20 weeks, then alternate courses of arsenoxide, 0.04-0.06 gram weekly for 8-10 weeks, and bismuth subsalicylate, 0.2 gram weekly for 8-10 weeks, for a minimum of one year. Potassium iodine, 10-30 drops three times a day, is used throughout. The spinal fluid is examined every six months. If cabinet heat cannot be used, the hot bath or double injections of typhoid vaccine may be used. Patients with gastric crises and in fair general physical status are also treated by this method with careful supervision of the fever therapy. The gastric crises can be helped or alleviated by various therapeutic methods to be found in modern textbooks. None are 100 per cent effective. Morphine should not be used. We have had good results with atropine, grains-1/150, intravenously, for three succcessive days. This treatment is followed by weekly bismuth injections and possibly in combination with tryparsamide, depending on the status and response of the individual patient and, especially in taboparesis, in the absence of optic atrophy of any degree. If the patient is elderly, if his general physical status is poor, if he has an associated cardiovascular syphilis, treatment must be much less intensive. Penicillin followed by courses of arsenoxide, alternating with bismuth subsalicylate (arsenoxide in small doses with three to 4-month intervals between arsenoxide courses, followed by bismuth and iodides), is advisable. Short rest periods are desirable.

In tabes dorsalis the most tragic disturbance is the formation of Charcot's joints, which are divided into two groups:

1—Nonreparative stages, in which the affected joints seem to melt away without any snowflake pieces of bone about them, which indicates nature's attempt at reconstruction.

2—The reparative type, in which nature attempts to repair the joint but, being unsure of her aim because of incoordination, plasters the bone about but not in the joint.

A great deal can be done for the patient with the reparative type of Charcot's joints, especially if the involvement be in the spine or the hip joint. Preliminary treatment with hyperpyrexia, penicillin, the iodides and bismuth for six months prepares the patient for operative measures. An Albee's operation can be successfully performed on the spinal cases and a bone shelf placed in the ilium for the support of the great trochanter, where the head of the femur has disappeared. We have several cases of this type, who are now walking about and are self-supporting after from one to twelve years. These results were secured in all but one case without the aid of penicillin.

Syphilitic Optic Atrophy

The course of untreated primary syphilitic optic atrophy invariably leads to blindness, the second eye always becoming involved. Much depends on early diagnosis and prompt institution of treatment. Fever therapy (in the form of malaria, cabinet or hot baths), penicillin and graduated doses of arsenoxide and full doses of bismuth, as in the outlined treatment of early syphilis, is our treatment of choice. This is followed by intensive, carefully managed, arsenoxide-bismuth therapy, as outlined in the outpatient treatment of early syphilis. Tryparsamide is contraindicated. Quinine should not be used to terminate malaria in cases of optic atrophy. Arsenicals are used with caution. If hot baths are used, and they are especially indicated in elderly patients and those in poor health, the patient should receive 40 hours above 104°F and 60 hours over 103°F.

Secondary syphilitic optic atrophy is the result of neuroretinitis or optic neuritis or is associated with extensive inflammatory lesions of the choroid and retina, and is relatively influenced by treatment and calls for no special measures.

TREATMENT OF SYPHILIS OF THE VISCERA

Hepatosplenic syphilis is the most spectacular of visceral diseases. It can be divided into three groups —the infammatory, the fibrous and the gummatous

types. The inflammatory type is found most frequently in the congenital syphilitic and in early syphilis. In both of these cases preliminary treatment with the iodides and bismuth for three weeks followed by the arsenicals gives the most dramatic results with a minimum of danger to the individual. Penicillin can be added if desired. In the fibrous and gummatous types long preliminary courses of iodides by mouth and intravenously plus bismuth intramuscularly should be used. It is doubtful whether penicillin has any place in the treatment of this disease. Arsenic is absolutely contraindicated because of the paradoxical cure first mentioned by Wile (Udo J.). This is characterized by the fact that gratifying results are secured in the initial stage of the treatment, but the patient dies soon thereafter of hepatic cirrhosis or acute yellow atrophy. Successful treatment has been secured on a considerable number of these patients by the use of iodides and bismuth only.

TREATMENT OF SYPHILIS OF THE SPECIAL NERVES

The special nerves have been discussed to some extent. An outline for the treatment of optic atrophy has been presented. Certain other conditions of the eye, such as interstitial keratitis, chorioretinitis, iritis, etc., are met with in syphilitic disease. In all of these conditions the use of hyperpyrexia in some form is imperative. Interstitial keratitis and iritis respond with gratifying results. It is well to use penicillin with this treatment as well as the iodides and bismuth. Subsequent treatment may consist of the arsenicals, bismuth and iodide, according to the age and physical condition of the patient.

The auditory nerve may be affected in early syphilis and consists of inflammatory changes, which resolve to the penicillin-arsenoxide-bismuth regime, or of chronic degenerative changes, which do not respond well to treatment. The degenerative changes are found most frequently in the congenital syphilitic.

The nerves supplying the sensations of taste and smell may sometimes be involved. All cranial nerves show the disease either as an acute inflammatory process or a degenerative one. The same line of treatment is used, and the same prognosis is made.

SYPHILIS OF THE BONES AND JOINTS

Particularly susceptible to syphilitic bone diseases are the flat bones of the skull. This condition occurs with more frequency in the congenital syphilitic than in the acquired and may include both tables of the skull.

Excepting in the congenital syphilitic individuals, syphilis in the joint is a rare finding. Charcot's joints have been mentioned. Occasionally joint surfaces are destroyed that are not Charcot in nature. Most of the acquired syphilitic joint disease affects the bursa of the joints, of which the most glaring example is the bursitis of Verneuil. In the congenital syphilitic the most typical joints are mono or bilateral infusion of fluid into the joints, known as Clutton's joints. In both instances these joint diseases are extremely resistant to treatment. Heat in some form should always be used, as is indicated in interstitial keratitis, which often accompanies Clutton's joints. With the exception of osteochondritis and saber shins, occurring in the congenital syphilitic, the bone manifestations of syphilis are classified as simple periostitis, osteitis, gummas, subperiosteal gummas, which may or may not break through to the surface, and extreme fragility of the bones, which is present most often in tabes dorsalis. Most bone and joint diseases of syphilitic origin are due to the late syphilitic disease. The general considerations of treatment are the same as those of any late syphilis, stress being placed on the iodides by mouth and intravenously and intramuscular injections of bismuth. Penicillin may be used, but the arsenicals should be used with caution.

SYPHILIS OF PREGNANCY

Because of the high rate of veneral disease in the armed forces, the returning soldier is likely to be infected with syphilis without his or the army's knowledge. We predict that the rate of congenital syphilitic infants will be on a continual rise for 10 years, as it was after the other war. Therefore, the treatment of syphilis of pregnancy becomes of prime importance. It is true that the state of pregnancy reduces the virulence of the syphilis in the mother, in some instances to the point that in later years all serological findings and evidences of syphilis are gone, having spontaneously disappeared without treatment. The most frequent cause of loss of the fetus after the fourth month is syphilitic disease. One of the easiest feats accomplished in the treatment of syphilis is to prevent the birth of syphilitic infants. Before the advent of penicillin, the effect of which is not well known, 92 per cent of all infants born to syphilitic mothers who had adequate treatment were apparently free of the disease.

The old course of treatment consisted of a minimum of twelve doses of neoarsphenamine at weekly intervals with an equal number of injections of bismuth. Therapeutists at that time began and ended their course of treatment with neoarsphenamine. The object in the treatment of the syphilitic mother is that she may bear a nonsyphilitic child. Two factors are taken into consideration:

a—To prevent the Spirochaetae pallidae from ever entering the embryo's body. It has never been proved that it does before the fourth month; therefore, treatment started before the fourth month will

in all probability prevent this calamity. Greater chance of success is obtained by treating the mother before and during the whole pregnancy. If treatment is begun after the fourth month of pregnancy, one feels sure that in a considerable number of cases the spirochaetae have already entered the body of the fetus.

b—The object there is to give sufficient treatment to rid the fetus of its disease. It is an axiom that these mothers must have complete physical examination accompanied by all the necessary laboratory work, and that during the course of the treatment frequent blood pressure readings, urine examinations and blood checks must be made. Pregnant mothers take carefully supervised antisyphilitic treatment well. Every syphilitic mother should have her treatment with every pregnancy in spite of changes in serological readings. Those women with early infections stand the most chance of transmitting the infection to the infant, while those with late syphilitic manifestations, either with the somatic involvement or central nervous system involvement, are less likely to transmit it.

According to the modern idea of treatment, which is not yet substantiated, penicillin must be a part of the therapeutic regime. The treatment in this case would be the same as the treatment of early syphilis, using the penicillin arsenoxide-bismuth regime. After this course has been given in the hospital, there are two methods open for follow-up treatment —alternating courses of neoarsphenamine and bismuth, in which 10 weekly doses of neoarsphenamine, 0.3-0.45 gram, are given weekly. Beginning with the ninth dose of neoarsphenamine and the tenth, a course of eight injections of bismuth is given, the seventh and eighth accompanied by neoarsphenamine in weekly doses for 10 doses. The course of treatment must always be planned so that it ends with the arsenicals. If the therapeutist wishes to substitute arsenoxide, it must be given twice a week for a total of 40 doses, if possible, using the same timing as was directed with neoarsphenamine. If 12 doses of neoarsphenamine or 20 doses of arsenoxide are given during the course of the pregnancy, it is extremely likely that the child will be born without the disease. The mother's treatment should begin again soon after the child is delivered and continue along lines similar to the treatment of late latent syphilis.

The infant's cord and corporeal blood should be examined as soon after birth as practical. Interpretation of these findings is likely to give some wrong impressions. The test on the cord blood is unreliable, and the test on the infant's blood, while more reliable, if possitive, may be due to passive transfer from the mother's blood, if her serological reactions are strongly positive. If her serological reactions are negative at the time of the infant's birth, positive findings in the child's corporeal blood are highly significant. Radiographs of the skeletal system of the infant should be made soon after birth, at the sixth week, the third month and at the end of a year.

Infantile syphilitic bone disease is peculiar to infants. Osteochondritis, which must be differentiated from bismuth lines, is the rule and is perfectly demonstrated by the x-ray. These findings never occur after the end of the second year. If the infant's blood is positive in the presence of absolutely negative findings, including the x-ray, treatment should not be instituted immediately, but titred serological examinations of the blood should be made at the end of a week, two weeks, a month and two months. If, without treatment, the reagin titre is continuously falling, it means that the infant is not syphilitic, but the serological reactions are due to passive transfer from the mother. If in the examination of the reagin titre the infant's blood shows a stationary or rising titre, treatment should be immediately instituted.

TREATMENT OF CONGENITAL SYPHILIS

It must be proved that the infant is a congenital syphilitic before treatment is instituted. This has been partly discussed above. Further confirming evidence may be found in a dark-field examination of the secretion from the eye, nose, aspirated fluid from inguinal or other nodes, inner wall of the umbilical vein or from mucous patches or other lesions on the body or mucous membrane.

The ideal treatment for congenital infants and very young children consists in the use of the combination treatment, using a total of 150,000 to 400,000 units of penicillin per kilogram of body weight, divided into 60 doses. During the time of administration of the penicillin, the arsenoxide and bismuth routine should be used. See "Treatment of Early Syphilis." The dosage for early treatment should be from 0.005 to 0.01 gram, according to the weight of the infant. Frequent estimations of the serological content of reagins is to be established during the whole course. In these infants the maximum of treatment should be given, and after the 32 weeks of treatment, as used in early syphilis, we advise a total of three years of treatment. This is necessary because the organisms of syphilis have by this time been so deeply seated in the tissues of the infant. A rest of one month should be followed by alternating courses of arsenoxide and bismuth for ten weeks more. It is then well to institute, after a month's rest, a course of neoarsphenamine, weekly injections, one milligram per kilo weight, and bismuth for 10 weeks at least. This gives a total of 62 weeks of

treatment. Treatment after this period should be as indicated.

The aim of treatment in the late congenital syphilitic is the control of symptoms and the relief of manifestations. Serological negativity is hoped for but rarely obtained. In these instances the treatment is the same as that outlined for acquired syphilis of a similar nature, using the same proportion of dosage as one does in the acquired cases. There are several divergences in the congenital from the pattern of that seen in acquired syphilis, all of which take special lines of treatment. Syphilitic eye disease, especially interstitial keratitis, syphilitic disease of the joints, Clutton's joints and saber shins, are practically never seen in the acquired syphilitic. The juvenile paretic and taboparetic have a hopeless future. Only five per cent of our series of 60 cases received any benefit from the most modern of treatment, not including penicillin but including malaria. The juvenile tabetic, on the other hand, has a brighter future. We have cases who are now adults, who seem to be free of all symptoms.

Malaria or heat treatment in combination with other forms of treatment must be used in interstitial keratitis, Clutton's joints, hydrarthrosis and periarthric infiltrations (syphilitic rheumatism.) Penicillin has no place in the treatment of these conditions, and we have given it up entirely. After the use of nonspecific therapy, the course of treatment in these cases remains the same.

In the majority of these cases in which there has been eye, bone or central nervous system involvement, the serological reactions remain positive. We have followed several cases for 30 years, who have had good treatment and observation all that time, who still have strongly positive serological findings.

The latent congenital syphilitic responds to treatment best. In the majority of cases negative serological findings may be secured.

Nerve deafness in the syphilitic rarely responds to treatment.

Cardiovascular syphilis rarely occurs. In an examination of over 100 chests of congenital syphilitics, including chest plate studies and, in many, electrocardiograph readings, no typical syphilitic changes were found.

We have used malaria in approximately 200 cases of congenital syphilis in the past 15 years. It is well tolerated by children and has marvelous results in interstitial keratitis and neurosyphilis other than paresis and taboparesis. For the temporary arrest of symptoms in paresis and taboparesis there is nothing superior to malaria, but, it must be again repeated, the results are only temporary, as many of these cases 10 years after their malaria treatment retrogressed into their original states. Examination of the blood and spinal fluid at this time often shows completely negative findings.

SPECIFIC RULES

1—Every syphilitic individual must have a complete physical examination, including titred serological tests.

2—The serological tests must be used in all hospital patients. They should be used in outpatient clinics.

3—In private practice these tests should be used more widely. They must be used in all cases of pregnancy and with each pregnancy.

4—Penicillin-arsenoxide-bismuth combination is recommended in all cases of early syphilis.

5—In all cases of recurrences of any types of earlier syphilis, heat must be used in combination with arsenoxide, bismuth and penicillin, if penicillin has not been used previously.

6—In syphilis of the central nervous system, paresis, tabes dorsalis (note exceptions)—

a—Malaria and penicillin (no arsenicals or bismuth) are used.

b—Heat cabinet (hot bath) plus penicillin, arsenoxide and bismuth are used.

The follow-up treatment consists of tryparsamide and bismuth (note exceptions.)

7—Optic atrophy. Heat (hot bath or cabinet) together with iodides and bismuth. No arsenicals.

8—Syphilis of the liver, late. Bismuth and the iodides. No arsenicals except in early liver disease.

9—Cardiovascular disease.

a—Penicillin-arsenoxide-bismuth regime followed by a bismarsen in the early disease.

b—Late (with decompensation), bismarsen only.

c—Late (decompensation), treat only the decompensation. When that is controlled, only bismuth and iodides are used.

10—So-called Wassermann fast cases (those who have had more than adequate treatment), suspend treatment and do titred serological tests. In those showing stationary or falling titre tests, no treatment. If units are rising, use further treatment.

11—In all cases of late syphilis, no matter what the involvement, the following procedure is imperative:

a—Spinal fluid tests including total protein

b—X-ray studies of the chest

c—Eye ground examinations

12—It would be desirable to do the above tests in all cases of early syphilis except seronegative primaries, in order to establish a base line for future examinations.

13—Never forget to take into consideration the immunological state of the patient. Active syphilitic

disease in the presence of negative serological tests indicates a dangerous syphilitic disease. The immunological state is at a low ebb. It must be raised—heat, malaria, typhoid, etc.

14—All pregnant women who do have or have had syphilis must be treated during each pregnancy.

15—Penicillin, arsenoxide, bismuth with follow-up treatment is imperative in syphilis of the newborn. It is possible to cure them clinically.

16—Late congenital syphilitics require long and patient treatment. Those with the latent disease may be clinically and serologically cured. In others, control of the disease is sought, usually not successfully.

17—Interstitial keratitis and joint disease in the congenital syphilitic require malaria or heat or both in addition to other treatment.

18—One must have a high index of suspicion of syphilis in all people who have obscure diseases.

19—In all late syphilis of any kind the use of iodine in appropriate doses is imperative.

THERAPEUTIC USE OF CONCENTRATED PROTEINS*

Lee H. Leger, M. D.

Kansas City, Kansas

Proteins are essential to the life of all tissues. Their importance in the maintenance of body metabolism has been well established in the past few years. Man must eat protein foods to replenish the daily wear and tear of body tissues. The body under various conditions and ages requires different amounts of protein to maintain normal nitrogen balance. In disease, injury, and convalescence these requirements are greatly increased. The Council on Food and Nutrition of the American Medical Association has recommended the following amounts of protein as being adequate for the maintenance of nitrogen balance:

Normal adult	1 gram per kilogram of body weight
Infant	3-4 gram per kilogram of body weight
Growing child	2-3 gram per kilogram of body weight
Pregnancy	1.5-2 gram per kilogram of body weight
Lactation	2 gram per kilogram of body weight

Proteins are complex organic molecules, consisting of amino acids linked together. Gastric and pancreatic digestion breaks the protein down through the peptone, proteose, and polypeptide stages to amino acids. They are thus absorbed and transported by the portal circulation to the liver. There a portion of the amino acids is changed into serum proteins, and the remainder, not needed for this purpose, is deaminated and converted into carbohydrate to be used as fuel, or excreated as urea.

Plasma proteins have many functions. They are the carriers of food, hormones, and immune bodies; they help in the production of blood elements; they maintain acid-base balance of the blood; and they serve to replenish tissue protein.

Plasma proteins are of two types: the albumins and globulins. The globulin fractions are fibrinogen and alpha, beta and gamma globulins. Each of these globulins has a specific physiological function. e.g., antibodies in gamma globulin and prothrombin in beta globulin.[1]

Plasma proteins are largely manufactured in the liver,[2] especially albumin and fibrinogen.[3] The globulins may be synthesized, at least in part, by the reticulo-endothelial system.[4] Albumin is regenerated at the rate of about 25 gram per day.[5] This rate of regeneration is not adequate if large amounts of body proteins are being lost. Elman and his coworkers[6] state that a reduction of one gram in the total circulating plasma albumin indicates a loss of 30 gram of body proteins. They suggest that a reduction of albumin from 4.0 to 3.5 gram per hundred cubic centimeters of plasma, in a 70-kilogram man, would represent a loss from the body of at least 510 gram of albumin. Severe depletion of body protein may require a long period of protein therapy to correct the deficit, and the plasma protein concentration may return to normal long before the body deficit of protein is made up.

DETECTION OF PROTEIN DEFICIENCY

The clinical detection of protein deficiencies is difficult, chiefly because clinical signs are absent until the deficit is pronounced, and even then the chief sign is edema, which may be the result of other factors. Detection of protein deficiencies will usually depend on the cause of the deficiency as elicited in the history and physical findings. The following should be considered in the detection of protein deficiency:

1. Optimum weight of patient: Main reliance in clinical work must be placed on a nutritional history. Weight loss is almost always associated with protein loss. Elman[7] stresses loss of weight in evaluating protein depletion. A protein deficient diet must have been inadequate long enough to have exhausted the reserve stores. The quality of proteins in the diet must also be considered. Proteins may be deficient in certain of the amino acids which the body requires, and yet be adequate in quantity. The diet must also contain adequate carbohydrate

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and fat to prevent the conversion of body proteins to carbohydrates for use as body fuel.

2. Plasma protein level is still our best method of measuring protein deficiency. However, a measurable fall occurs only after a pronounced loss of body protein. Protein loss from the body is reflected in the plasma protein as soon as the reserve stores of protein are depleted.

3. Plasma albumin level first becomes reduced in protein deficiencies because it has about five times the osmotic effect of globulin, and it is regenerated more slowly.

4. Plasma volume: Interpretation of plasma protein levels is often difficult unless the plasma volume is known. Patients with plasma concentrations, such as those with dehydration, severe burns, etc., may appear to have normal plasma protein levels, but when solutions of electrolytes are administered the protein concentrations are found to fall to low values.

5. Nitrogen intake and output: A negative nitrogen balance exists when excreation of nitrogen is greater than the amount consumed.

6. Protein loss from any cause should make one suspect protein deficiency.

ADMINISTRATION OF PROTEINS

Protein deficiencies are best treated by one of the following methods of administration:

1. High Protein Diet: Food by mouth is the most effective route of administration of protein. However, many times this cannot be accomplished because of associated anorexia, or disturbances of the gastro-intestinal tract. The sick patient will seldom take more than 100 gram of a high protein diet per day. This amount is seldom adequate if the deficiency is marked. The high protein diet should always be supplemented with vitamins.

2. Parenteral Proteins: Parenteral proteins must be given in very large amounts to be effective in restoring nitrogen balance. This procedure may be life saving at times, especially if the patient is unable to take proteins per orum. Parenteral proteins are of four main types:

a. Human Plasma: Human plasma is an excellent source of protein, but one unit furnishes only about 12 to 15 gram of protein. Many units are required to restore the total body protein loss.

b. Protein Hydrolysates and Concentrates: Parenamine and Amigen have been used quite extensively for parenteral replacement of proteins. They are quite satisfactory, provided they are given slowly, and the liver is capable of deaminating them so that they can be utilized.

c. Crystalline Amino Acids: This should be the ideal preparation to give for the parenteral replacement of proteins. However, the expense and availability of such preparations make their use almost prohibitive at the present time.

d. Human Albumin: Human albumin with low salt concentration has been used to some extent and is of great value where albumin is the principal plasma protein being lost. It is not generally available.

3. Protein Concentrates (Oral): Protein digests or hydrolysates of casein and yeast are excellent for supplementary feedings, if the patient will take them. Their use may facilitate the giving of as much as three or four gram of protein per kilogram of body weight. Much of the unsavory taste can be overcome by incorporating them into breads, cake, sandwich spreads, desserts, jello, hot cereals, bouillon, soups, and milk. Three or four feedings of 25 to 35 gram each can be given per day.

Many such preparations are on the market. They vary considerably in per cent of protein and taste. Some of these preparations are: Dietene, Aminoids, Lactamin, Cholamin, Folamin, and Protolysate.

CAUSE OF PROTEIN DEFICIENCY

1. Insufficient Intake: The most common cause of protein deficiency is inadequate diet. This may be due to poor economic status, or poor knowledge of diets. Poor quality proteins may also be a factor. At least eight of the 22 amino acids are necessary for the maintenance of a nitrogen equilibrium, and since these essential amino acids cannot be synthesized by the body, they must be taken in the diet.

2. Impaired Digestion and Absorption: Impaired digestion and absorption occur in the presence of diseases of the stomach, intestine, pancreas, and liver.

3. Inadequate Synthesis of Plasma Proteins: Manufacture of plasma and body proteins depends upon an adequate and proper intake of proteins, as well as a proper functioning liver capable of the synthesis of plasma proteins.

4. Increased Breakdown of Body Stores: Depletion of body stores of protein by febrile disease, increased metabolism, and chronic exudative processes is a frequent cause of protein deficiency.

5. Excessive Loss of Proteins: Excessive loss of protein through any cause such as the nephrotic syndrome, ascites, hemmorrhage, burns, etc., is a common cause of protein deficiency.

SPECIFIC INDICATIONS FOR HIGH PROTEIN INTAKE

I. *Kidney Diseases:* Patients with kidney disease need proteins the same as normal individuals, especially if they are losing large amounts in the urine. They should also have sufficient carbohydrate to assure that they will not have to use their own proteins as body fuel. The loss of large amounts of protein in the urine with resultant reduction in serum albumin level is a major factor in the pro-

duction of the protein deficiency seen in patients with kidney disease.

Patients with hypoalbuminemia and proteinuria require the optimum protein intake of normal individuals, perhaps higher. When uremia, hypertension, and heart failure complicate the picture, the protein need is less. If anorexia, nausea, and vomiting are present, it may be necessary to resort to parenteral proteins and glucose to maintain a nitrogen balance.

II. *Liver Disease:* Patients with disease of the liver are unable to maintain normal serum albumin levels. Attention has been directed to the importance of a high carbohydrate intake for increasing liver glycogen, and thus preventing hepatic damage. Recently Ravdin and co-workers[8] have demonstrated that protein is of more value than carbohydrate in protecting liver cells from damaging agents. The sulfur-containing amino acids, methionine and cysteine have been emphasized as the particular components of protein which are effective in the protection of liver cells.[9]

Patients with cirrhosis of the liver and hepatitis may not willingly ingest high protein diets. The acutely ill hepatitis patient may even require parenteral fluids and plasma.

Stare and Thorn[10] have recommended the following regime for patients with hepatitis and cirrhosis:

1. A daily intake of 75 to 150 gram of protein, 300 gram or more of carbohydrate and 50 gram of fat. In general, it is possible to consume 100 gram of protein with three daily meals. The remainder of protein may be provided in supplementary high protein feedings.

2. Approximately 10 mg. of thiamine, 10 mg. of riboflavin, 250 mg. of niacin amide acid, 500 mg. of ascorbic acid are given daily during the first three or four days. Later the dosage of all these vitamins may be reduced to approximately one-fifth of these quantities. Choline chloride or methionine may be given in enteric capsules 1.0 gm. twice a day.

3. Intravenous administration of proteins, carbohydrates, and water soluble vitamins may be indicated, depending on the condition of the patient.

III. *Gastro-intestinal Disease:* Gastro-intestinal malfunctions are the chief causes of protein deficiency. Disturbed function of the gastro-intestinal system from gastric or duodenal ulcer, chronic pancreatic disease, enteritis, ulcerative colitis, diarrhea, and draining fistula are almost invariably associated with lowered proteins.

CoTui[11] has reported excellent results in the treatment of peptic ulcer patients with protein hydrolysates. Patients were given 5 gm. of Amigen and 5 gm. of Dextri Maltose per kilogram of body weight daily in 8 or 9 two-hourly feedings. No antiacid or antispasmodics were used.

IV. *Convalescence and Infection:* Rapid loss of serum and tissue proteins is noted during the period following trauma, severe infections or operations. Elman[12] and CoTui[13] have presented convincing evidence that convalescence can be greatly shortened if these protein deficiencies are made up.

V. *Diabetes Mellitus:* In poorly controlled diabetes, large quantities of nirtogen are excreted in the urine as a result of glyconeogenesis. Large protein deficit may occur. Ample protein, about 1.5 gram per kilogram of body weight, is required for the first few weeks of therapy, after which one gram should prove ample.

VI. *Thyrotoxicosis:* The protein need is greatly increased in the patient with thyrotoxicosis because of great increase in metabolism. Weight loss may be extreme. The loss of protein is largely responsible for the muscle weakness. A high protein, high caloric diet is indicated in conjunction with antithyroid drugs, or surgical treatment.

VII. *Hypoglycemia:* Spontaneous hypoglycemia is quite frequent, especially in the neurasthenic fatigue patient. The author has found the use of a diet high in protein and low in carbohydrate, with no free sugar, of great benefit to these patients. Portis[14] has reported similar results.

VIII. *Miscellaneous:* Anemia, exudative skin disease, hypoproteinemia (dietary), anorexia nervosea, pregnancy, and lactation are all causes of protein deficiency, and should be given the benefit of a high protein diet.

IX. *Surgical Cases:* The importance of protein in wound healing, resistance to infection, reduction of edema, prevention of hemorrhage, and prevention of liver damage makes the question of protein need of paramount importance in surgery. Hypoproteinemia is common in the gastro-intestinal surgery patient. This may lead to edema of the gut and delayed healing of anastomoses, etc. CoTui[15] [16] points out that the protein loss in convalescence from operation varies directly with the severity and duration of the operation. These patients should all have high protein intake to hasten their convalescence.

CONCLUSION

In conclusion it can be stated that protein digests and hydrolysates, although not perfect, have furnished a means whereby patients, who require more proteins than can be fed in the ordinary diet, can be given adequate supplementary feedings of protein that is predigested and readily absorbed.

Most diseases associated with weight loss or evident loss of protein should be suspected of protein deficiency and are deserving of a thorough investigation. However, if investigation is impossible, a

trial with a high protein diet is definitely justified. It can do no harm and more often than not, will be a benefit.

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BRUCELLA MENINGO-ENCEPHALITIS TREATED WITH STREPTOMYCIN

Archibald John Brier, M. D.

Topeka, Kansas

The purpose of this paper is to present a case of Brucella meningo-encephalitis which was treated with streptomycin and recovered.

Reviews of the literature on Brucella meningitis were made in 1934 by De Jong[1] and in 1937 by Black[2]. These were of necessity repetitious. Each of the above observers presented a new case. Since these publications very little has been forthcoming.

Harris[3] published a most interesting report of a fatal case of Brucella invasion of the central nervous system. This patient was a native of the middle west and had been a foreman in a packing plant. He had had Brucellosis for a rather long time, being discharged from service in the Navy because of the disease. In retrospect, the first suggestions of central nervous system involvement, it would seem, could be dated previous to his discharge from the Navy which was February 4, 1942. By March 20, 1942, he had suffered severe brain episodes which were thought to be a brain tumor. His course was stormy. He was hospitalized on March 20, and biopsy was done on April 9, 1942. He expired on the same day. A most instructive pathological report was given, which for obvious and satisfying reasons we are not able to present in our case.

The available literature on central nervous system manifestations of Brucella origin is indeed scant and, so far as known, no previous report of treatment of this disease with streptomycin has been made.

CASE REPORT

J. M., a male, aged 54, was admitted to Christ's Hospital, May 6, 1946. The history of this illness dated back about two weeks, when he experienced a sudden, very severe headache. The pain was continuous. It was originally of frontal distribution spreading over the top and back of the head. He was seen by a competent rhinologist because the patient concluded he must have "sinus trouble." No sinus pathology was recognized, and at the time of this examination the occular fundi were studied and a note made that there was an absence of the normal physiological cupping of the disc. The pain continued, and within three or four days vomiting of projectile type occurred with the continuation of the headache. On about the 12th to the 14th day of the disease, the patient "began to act and talk out of his head." He was then brought in for hospitalization.

PAST MEDICAL HISTORY: Ordinary diseases of childhood. For many years has had migraine headaches, with considerable regularity. Twenty years ago he had a thoracoplasty for what was said to be tuberculosis. At age of 20 years he had mumps with orchitis. There was no history of even slight head injury at any time.

FAMILY HISTORY: Noncontributory except possibly that one brother died of "lung trouble."

At the time of admission to the hospital the man showed the following physical findings:

An adult male about 71 inches tall; spare, but fairly good musculature. He was arousable and responded to questions incoherently. He was completely disoriented. His attitudes and answers were silly and facetious, aside from being irrelevant. When

asked about location of head pain, he did give some idea that he had pain in the frontal areas by passing hand over forehead saying, "here."

His general physical examination, except for the chest and pulse, was negative. The pulse rate was 46.

The patient was not cooperative but diplopia at 16 to 20 inches was discovered. He could point to a pencil when right eye was covered, but when left eye was covered he said, "It's right down here on my nose," but could not point to the pencil.

Right pupil was larger than left, but not fixed. Both pupils responded to both light and accommodation and were regular. All the eye muscle movements were normal; no nystagmus. The occular fundi showed moderate congestion of the veins and definite choking of both discs, two or three diopters elevation being measured.

There was slight if any nuchal rigidity and certainly no occipital pain or tenderness on pressure.

The other cranial nerves were all intact. No weaknesses of the motor system were present.

All tendon reflexes were thought to be about normal, the patellar perhaps being slightly sluggish. The left plantar response was equivocal at first, later approaching the flexor type. The abdominal reflexes were slow and soon fatigued. There was no clonus. A mild ataxia noted left hand. During the early examinations he was asked to read a label on a box. He repeated the first word three times (there were three words) and was quite certain that this was what was printed on the box. No other response could be gotten.

On admission the laboratory findings were: Urine negative; Blood: Hb. 13.5 gm. RBC 4,500,000; WBC 7,400; Poly. 76; Lymph. 124; Urea 40.12; Urea N. 18.75.

When first seen he was given rather generous amounts of hypertonic dextrose, which gave a great deal of comfort. He became more quiet and responsive but was still confused, silly and disoriented.

On May 9th first spinal puncture was done. The fluid was colorless; 420 cells; Pandy 4+. X-rays of skull were negative. The pulse had risen to 78 per minute and the blood pressure was 126/76. His condition was more favorable.

A tentative diagnosis of frontal lobe tumor was made.

A neurological consultation was requested. The report was as follows:

"Patient interviewed and neurological examination done as far as possible. History obtained from patient is unreliable, contradictory and there were many irrelevant and inappropriate answers to questions as well as silly and facetious replies. Much material appears delusional and he is obviously confused and disoriented in all spheres. Patient cooperated poorly at times and sensory examination is entirely unreliable as he refers to pin prick and dullness to all degrees as 'sharp.' He refers to tuning fork as 'pressure' and there is much perseveration of replies even when stimulus is changed. Motor status shows no remarkable change. Muscle strength and tone appear good. There is no dysmetria or ataxia or decomposition of movement with use of hands. No tremors noted. Much facial grimacing is noted. Cranial nerves are negative as far as can be reliably determined except for the following: (Pupils dilated slightly from cycloplegic)

"(1) Fundi not satisfactorily visualized because of patient's lack of cooperation but there appears to be blurring of disc margins and mild choking with venous engorgement but no hemorrhages.

"(2) Questionable diploplia most of the time is contended in right temporal region of vision, but patient's answers are changeable and unreliable.

"All deep reflexes are active and equal. Abdominals are sluggish. No pathological reflexes elicited. No nuchal rigidity. Denies headache as such but claims his forehead hurts off and on. Duration or character of present illness can not be determined from patient. While nurse's notes do not indicate involuntary soiling with urine and feces, sheet is wet from urine and patient admits he urinated but can give no reason for not using urinal.

"Clinical picture indicates an acute organic psychosis apparently relating to headache, vomiting, confusion, and sensorium defects. Lack of accurate history and spinal fluid data make the etiology uncertain but the present preponderance of evidence points to an expanding intra-cranial lesion—most probably a frontal lobe tumor. Would like to check fundi again, but patient should be under neurosurgical observation with consideration of ventriculography when feasible."

Neurosurgical consultation was asked on May 11, and the report was as follows:

"Patient is comfortable in bed and at the present time has no complaints. He is somewhat confused for time and during testing shows definite cerebral retardation; he is also euphoric. He appears as old as his stated age and shows no evidence of recent weight loss.

"Examination of the head shows no localized area of tenderness to percussion; no bruit audible. There is some nuchal resistance to acute flexion of the head onto the chest. Cranial nerves—the fundi show an obscuration of the disc margins with an absence of the cup, and is suggestive of possible early chronic papillitis—with no measurable papilloedema; the remainder of the cranial nerves are intact.

"He shows no motor weakness nor sensory deficit in either of the four extremities; it is to be noted that he had slight difficulty in recognizing objects placed in his hands without seeing them—this may be due to the callouses which he has on his palms and fingers. Position sense is normal. Deep reflexes are all physiological—a little less active in both upper extremities as compared to the lower but bilaterally equal; no Hoffman. The abdominal reflexes are only present in both upper quadrants and easily exhaustible; none obtained in both lower quadrants; the cremasterics are sluggish and equal; the plantar responses are bilaterally flexor. He has no Kernig's signs.

"Coordination is quite well performed—but it is to be noted that he was a little less accurate in the finger to nose test with his right hand and with the right heel to knee test as compared with the opposite side.

"Opinion: The diagnoses to be entertained here are a spontaneous subarachnoid hemorrhage or space occupying lesion. With the history and his present apparent improvement there is less liklihood of the latter—but this must be ruled out as he may have supratentorial lesion possibly in his prefrontal region. The absence of any definite signs of increased intracranial pressure at the present time permits further clinical observation and the pursuance of other investigation."

The patient had been mildly disturbed but could be controlled by very gentle pursuasion and sedation. He was still quite silly but more alert. The spinal drainage seemed to produce some relief. He was less disturbed after each drainage. On May 11, patient had an electroencephalographic study. The report was as follows:

"The record is basically flat and disorganized. It contains no alpha-activity at any time. No spikes appear. There are many muscle-current artifacts introduced by patient's restlessness. Long bursts of 50 to 75 microvolts 3 to 7 c.p.s. activity appears, symmetrically; most of this activity is picked up in the frontal and central areas.

"IMPRESSION: ABNORMAL EGG, suggestive of diffuse cerebral pathology involving the midbrain."

On May 13, 1946, the spinal fluid study was again made. There were 600 WBC in a clear fluid; 408 mgm. per cent protein. At this time the original pressure was but 80 mm. CSF. After withdrawal of 6+ cc, the final pressure was 72 mm. CSF. The Quackenstebt test was positive. After this spinal puncture today the patient was more comfortable, as he says 'less nervous.' There was no significant change in the blood pressure. On this same day the neurological manifestations were unchanged. The discs were flat but the margins were not clear cut. The nerve heads were lighter than normal. A marked irregularity was seen on the nasal side of the left disc. The patient was much more alert. He was out of bed and moving about the ward. His gait at this time was not atoxic. Rhombergism was not present. On this same date a slight elevation of temperature was observed. Right lateral stereogram of skull made on this date was essentially negative.

On May 15th the spinal fluid was studied in another laboratory. The fluid was clear though slightly xanthochromic. There were 302 cells counted; 96 per cent lymphocytes and 4 per cent polys. Eight red cells were found. The protein was 62 mgm. per cent. (Dennis-Ayre method.)

May 17: BP 122/65. For the past two days the patient has been clearer. His responses are more lucid and he has some idea that he has been sick. He was not completely oriented and still somewhat confused. On this date the neurologist made the following report:

"Patient clear, cooperative, and says he is his 'old self,' and now realizes that his illness has been previously minimized by himself. Insight good for age and status. Neurologic examination essentially negative except for slight haziness of disc margins and shallow cupping. This may be of no significance at this time. Believe patient may be discharged to carry out (moderate) activities at home with moderation in all of them and return in two months for a recheck.

"FINAL IMPRESSION: Acute organic psychosis associated with old spontaneous subaranchnoid hemorrhage."

On May 18, patient was fairly comfortable. BP 120/70, but rectal temperature observed 101.4°F. at 8 P.M. For the past four days there has been a slight increase in temperature as high as 99.6° to 100.6°F.—for which no cause could be found. The eye grounds had approached more nearly normal except for what was considered to be an increased congestion of the veins of the left retina. The disc margins are less obscure though definitely *NOT* sharply defined.

Spinal fluid study showed original pressure of 240-250 mm. CSF. Seven cc. of slightly xanthochromic fluid was withdrawn with a final pressure of 150 mm. CSF.

May 19: For no particular reason other than the low grade fever and because of the presence of Brucellosis in the middle west an agglutination test of the blood with Brucella abortus was done. This was found to be "4+" in 1:320 dilution. At this time the possibility of meningo-encephalitis of Brucella origin began to be thought of albeit vaguely. There

was definitely no history of any such infection with any characteristics remotely suggesting the disease.

May 21: Blood picture showed Hb. 13 gm.; RBC 4,700,000; WBC 7,000; polys. 62 per cent; lymph. 35 per cent; mono. 3 per cent.

May 22: Spinal fluid pressure noted to steady at 204. Nine cc. were withdrawn. He had visited in the ward and was apparently quite comfortable. Urine negative. Diagnosis of Brucella meningoencephalitis made. Further inquiry as to possible source of infection yielded no information.

May 24: Spinal fluid pressure was 250-270 mm. The fluid was clear; contained 100 RBC, and 450 WBC; CSF protein 292 mgm. per cent; sugar 26 mgm. per cent; Agglutination positive for Brucella abortus 1:64.

May 25: Sulfadiazine started, 8 gm. daily.

May 30: Sulfadiazine resumed and taken without complaint. Since the first sulfadiazine the temperature ranging from 98.6° to 99.6°F.

May 31: Today complained of pain of moderate degree in back of neck. Some nuchal stiffness and Kernig's sign somewhat suggestive though not conclusive.

Spinal fluid: Pressure 470 mm. Agglutination of Brucella abortus Huddelson's Antigen 1:1000. Lederle Antigen 1:2400; cells: 10 RBC and 620 WBC; polys. .4 per cent; lymph. 97.6 per cent; endotho. 2.0 per cent; protein 372 mgm per cent; sugar 52 mgm per cent. Animal innoculations today with CSF negative. Blood sulfadiazine level 6.8.

June 3: He ate well and was quite clear mentally. Spinal fluid studies gave the following information: The first pressure varied between 190 and 230 mm.; after the removal of approximately 15 cc. fluid, the pressure varied between 114 and 123 mm. The laboratory reported 2200 RBC; 5700 WBC with 100 per cent lymphocytes. Sugar 35 mgm. per cent; protein 372 mgm. per cent. Brucella agglutination 1:1000.

June 4: Has been quite comfortable. Visiting, smoking, and eating well. His temperature (rectal) did not go above 100°F. On this date a generous amount of streptomycin was received from Dr. Chester S. Keefer. It was suggested that the patient be given 4 gm. of streptomycin each 24 hours by intramuscular route and 50,000 units intrathecally each day. The sulfadiazine was discontinued and four doses of streptomycin were given totaling 2.5 gm., by intramuscular route. Blood agglutination Brucella abortus, 1:3200.

June 5: The intramuscular medication was continued giving 0.5 gm. every 3 hours in 5 cc. of distilled water. At 9:30 A.M. 50,000 units of streptomycin in saline was given intrathecally. By noon his temperature had risen to 101.6°F. He was disturbed and quite confused and refused food. By 4:00 P.M. his temperature was 102.4°F., pulse 112, and respiration 28. He complained of a frontal headache. He appeared quite ill and almost stuporous. When aroused he would answer questions listlessly and return to his stuporous state. The temperature remained at 102°F. all the remainder of the day. The dose of streptomycin was reduced to one-half and given at the regular intervals. Total streptomycin for the 24 hours was 3.25 gm. intramuscularly and 50,000 units intrathecally. He was given 500 cc., 10 per cent saline intravenously.

June 6: This morning patient appears slightly better though he spent a fretful night. The reduced dose of 0.25 gm. was continued today on regular schedule. Complained of pain at site of intramuscular injections. There have been no visual disturbances, no vertigo but he was nauseated and vomited on two occasions. Total streptomycin 2 gm. intramuscularly plus 50,000 units intrathecally. Temperature: low at 12:00 midnight 99.6°; high at 8:00 P.M. 102.4°F.

June 7: Today he is more comfortable. He has rested well during the night. Still complains of pain in buttocks from the injections. From 9:00 A.M. on, he was given the full dose of streptomycin, rather than the half dose of yesterday, intramuscularly with 50,000 units intrathecally. Spinal pressure: initial pressure 78-84 mm., final pressure 40 mm. Temperature rose to 103° at 8:00 P.M. on this date; the low being 100° at 8:00 A.M. and 12:00 noon. Streptomycin, 4 gm. intramuscularly and 50,000 units intrathecally, was given.

June 8: The highest temperature recorded was 102°F. rectally. He was not comfortable and more irritable than he had been for some time. The spinal fluid pressure was initially 96 mm. It was clear but there were 350 RBC and 250 WBC counted with 90 per cent lymphocytes. Sugar 50 mgm. per cent. Chlorides 644 mgm. CSF agglutination, Lederle antigen 1:1280, Colloidal gold 5555532110. The usual 4 gm. of streptomycin were given plus 100,000 units intrathecally.

June 9: Highest temperature 101.6° (rectal); lowest 100°F. Urine negative. Spinal fluid pressure 110-114 mm. Cultures of blood and spinal fluid grown under 10 per cent CO_2 as well as animal innoculation have all been negative. Four gm. of streptomycin were given today intramuscularly. This was the last dose of the series to be given by intramuscular route. A total of 19.47 gm. of streptomycin was given intramuscularly. Today he was given 100-, 000 units intrathecally. He said that he felt more "nervous" than at any time since he came to the hospital. He says that he feels more "clear" than at any time and passes hand across his forehead as he

has done on numerous previous occasions. As per schedule the intramuscular medication was discontinued.

June 11: 75,000 units of streptomycin were given intrathecally. Patient comfortable. He is up and about the ward. Hb. 13.5 gm.; RBC 4,200,000; WBC 4000; polys. 60 per cent; lymph. 38 per cent; mono. 2 per cent. High rectal temperature 100°; low 99.8°F.

June 13: The initial CSF pressure 180 mm.; final pressure 74 mm.; 10 cc. fluid removed. Protein 239 mgm. per cent; chlorides 644 mgm. per cent; agglutination 1:1280; Colloidal gold 55555-32110.

June 15: Hb. 14.5 gm.; RBC 4,800,000; WBC 10,350; polys. 56 per cent; lymph. 40 per cent; eosin. 4 per cent. Spinal fluid pressure 220 mm. He says he is "much better" and that he can walk without "swimming" and that he had gotten better in the past eight days. This dates back to the third or fourth day of streptomycin therapy.

June 19: The patient is quite comfortable. Highest temperature was 100°F. The laboratory findings were: CSF initial pressure 220 mm., 26 cc. removed. Final pressure was 30 mm. Agglutination: Brucella 1:400; tularemia negative; protein 304 mgm. per cent; sugar 34 mgm. per cent; WBC 188; RBC 15; lymph. 85 per cent; polys 15 per cent. Blood agglutination: Brucella 1:500; tularemia negative.

The neurologist's note at this date is as follows:

"Records reviewed and patient interviewed and re-examined. There is agreement on course of events and response to chemotherapy. Clinical and laboratory findings unquestionably support the diagnosis of May 22 of Brucellosis meningo-encephalitis. Aside from general weakness and local soreness from spinal taps and intramuscular injections, patient feels well. Disc margins are much improved over previous obscuration, although left appears more blurred than right. Patient is anxious to return home. E.E.G. should be repeated as soon as chemotherapy is completed for comparison with original tracing."

June 20: Condition same. Hb. 13.5 gm.; RBC 4,680,000; WBC 8,000; polys. 53 per cent; lymph. 44 per cent; mono. 1 per cent; eosin. 2 per cent.

June 21: A repeat of the electroencephalographic study was made which was both interesting and enlightening. The summary of E.E.G. is as follows:

"This is an extremely flat record containing little alpha activity. It is symmetrical throughout. Occasional short runs of 5.7 cps activity appear in all leads. Hyperventilation increases the voltage and amount of the slow activity. IMPRESSION: Borderline Abnormality."

June 23: The patient received no streptomycin. He was permitted to go home, and return in evening. Temperature did not rise above normal.

All streptomycin was discontinued from June 22 on.

June 26: Laboratory findings were: Blood: Hb. 13.5 gm.; RBC 5,240,000; WBC 6400; polys. 69 per cent; lymph. 30 per cent; eosin. 1 per cent. Spinal fluid: WBC 115; polys. 9 per cent; lymph. 91 per cent; protein 400 mgm. per cent; sugar 39 mgm. per cent; colloidal gold 5555532110. Agglutination: Brucella 1:160. From the second laboratory a protein content of a portion of this same specimen of fluid was reported as containing 165 mgm. per cent, which was an increase compared to the previous reports from this same laboratory.

The patient did, however, complain of some pain in his eyes. This apparently was mild and something which had been noticed for the last several years. Even though it had been spoken of during his hospitalization, nothing could be found to account for it. He was discharged to go home to return in one week for a recheck.

July 5: The patient returned at which time there was no change in his neurological picture. The spinal fluid pressure was 350 to 400 mm. of fluid. Spinal fluid: RBC 10; WBC 125; polys. 12 per cent; lymph. 88 per cent; protein 264 mgm. per cent; sugar 49 per cent. Agglutination 1:200. Aside from a tremor of the hands which was not pronounced, the patient was quite comfortable. On the following day a spinal drainage was done and a spinal fluid pressure of 240 to 250 mm. was present.

July 17: Patient was seen at which time said he felt so well that he thought of not coming in. Spinal fluid study made. Initial pressure 350 mm. CSF; final pressure 60; 25 cc. was removed. The cell count was 85; lymph. 98 per cent; polys. 2 per cent; protein, hospital laboratory, 352 mgm. per cent; the second laboratory using the Dennis-Ayres technique, 210 mgm. per cent.

COMMENT

This case is presented as a case of meningo-encephalitis of Brucella origin, knowing that one definite objection to this diagnosis will be that the organism was not recovered either from culture or by animal innoculation. It is felt, however, that unless some other phenomenon produces the high titre of agglutinins for the Brucella organism, this diagnosis is valid.

Another and most interesting sidelight is the difference in the cerebro spinal fluid protein. Estimations from three different laboratories on the same specimens of fluid—two sources being considered in this report. The need for standardization of cerebro spinal fluid protein estimation would seem to be indicated.

Our case as well as all others herein referred to, should direct the attention of observers toward the minute study of the cerebro spinal fluid in all cases of Brucellosis presenting any symptoms whatever referrable to the central nervous system such as headache, vertigo, delerium, etc.

To evaluate a therapeutic procedure on the basis of one case would be silly. Being one case specific and as objective as possible, we will say that the value of streptomycin in the treatment of this one particular case of Brucella meningo-encephalitis was definitely of value. When the patient, as mentioned above, is asked when he noticed a marked improvement and, unguided, dated his improvement from the second day of the use of the streptomycin, it would appear that this information could be used at least as strong presumptive evidence of benefit. This is in spite of the fact that the first 24 hours of streptomycin therapy left the patient only a deficit in comfort and well being.

None of the specific biological therapeutic modalities were used in this case because of the fear that focal specific reactions might occur. These have been used in apparent benefit but were eschewed by us because of their, at least theoretical, hazards.

No comment can be made on the maintained elevation of the spinal fluid pressure and if possible this will be followed over a period of time. It cannot be felt that the irritation from the streptomycin therapy was wholly responsible for the continued elevation of the CSF pressure but it is certain that this was a factor. The studies of the fluid certainly suggest that the trauma done by the streptomycin was minimal if the cell counts can be considered as an index of irritation and these counts compared to the counts subsequent to the use of air, serum, etc.

The colloidal gold reading unfortunately was not done before the beginning of the streptomycin treatment but its constancy through 13 days is interesting.

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Special Train to A.M.A. Meeting

The American Medical Association centennial celebration will be held at Atlantic City, June 9-13, 1947. This will be the largest and most important A.M.A. convention of all time. The scientific program will include not only recognized specialists of the United States but also speakers from the entire world. Exhibits and all other events are scheduled to be in keeping with the memorable occasion.

The Kansas Medical Society is cooperating with the Oklahoma State Medical Association in sponsoring a special train to Atlantic City. Present plans include a vacation trip for those who desire to remain a few days at the close of the meeting. A tentative itinerary includes a boat trip to Boston, a visit in New York, a scenic ride through the White Mountains of Vermont, and stops at Montreal and Quebec.

This will be an all-expense tour covering all costs, including hotels, taxi fares, even tips, except meals. Reservations at Atlantic City and at all stop-over points will be made for all passengers on the train.

Complete details will be mailed to each member of the Society, but those doctors planning to attend the A.M.A. convention might consider now the advantage of traveling with a select group in the finest of accommodations at low cost. Passengers will consist of doctors from this area and their families, all combining a trip to the A.M.A. meeting with a completely restful and pleasant vacation.

Standards of Construction Established

Standards of hospital construction and equipment, required under terms of the Hospital Survey and Construction Act, were recently drafted by the Office of Technical Services, Division of Hospital Facilities, U. S. Public Health Service, and will apply to all projects to be built with federal assistance under this legislation.

The standards were reviewed and approved by a committee from the American Institute of Architects and by the Federal Hospital Council and will be submitted to the Surgeon General and the Federal Security administrator before they are published and made available to persons interested in the program. It is hoped that they will be released within the month.

The established standards will constitute minimum requirements considered necessary to insure properly planned and well constructed hospitals and health centers, and will form a basis for the development of higher standards.

No attempt was made to make the standards coincide with the local codes and regulations of the various states, but strict compliance with all local regulations will be required.

In general the standards fall into five classifications: site, architectural, structural, mechanical, and drawing and specifications. The architectural standards cover the following types of projects: general, tuberculosis, mental, psychiatric and chronic disease hospitals; nurses' homes; schools of nursing; public health centers, and state public health laboratories.

Mississippi Valley Essay Contest

The seventh annual essay contest sponsored by the Mississippi Valley Medical Society will be held in 1947, and a prize of $100, a gold medal, and a certificate of award will be given the author of the best unpublished essay on any subject of general medical interest. Contestants must be members of the A.M.A. and residents of the United States. The winner will be invited to present his essay before the annual meeting of the Society at Burlington, Iowa, October 1-3. Complete information on the contest may be secured from the secretary of the Society, Dr. Harold Swanberg, 209 W.C.U. Building, Quincy, Illinois.

CANCER OF THE STOMACH

More people die of cancer of the stomach than of cancer of any other single organ. Approximately 16 per cent of all cancer deaths are due to cancer of the stomach.

Untreated cancer of the stomach leads to death in three to six months from the time the diagnosis is made.

Radical excisional surgery leads to cure in 50 per cent of the cases in which the growth appears confined to the stomach at the time of the operation. Including the cases in which there is regional lymph node involvement, only 20 per cent survive 10 years.

At the present time, however, 50 per cent of cases are clinically inoperable when the diagnosis is made, and of the remaining 50 per cent subjected to exploration not more than half are found to be resectable.

Early diagnosis and early radical resection give the only hope of definitive cure.

All individuals with unexplained symptoms of indigestion which persist longer than ten days should be subjected to thorough clinical investigation including laboratory, X-ray, and gastroscopic examinations.

All individuals, in whom the diagnosis of gastric ulcer is made, who do not show X-ray evidence of healing after four weeks of good medical management should have surgical intervention.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

As a result of a conference between your Committee on Veterans Administration Affairs and officials of the Veterans Administration, a new agreement becomes effective on January 15. In the future fee designated physicians will perform services for the Veterans Administration under the following simplified regulations.

The program regarding examinations for compensation purposes is virtually unaltered except that all authorizations for examinations will be made by the medical coordinator at Topeka. Examinations should be completed within 10 days and returned to the Topeka office. Those held to be inadequate for rating purposes will be submitted to the medical society Committee on Veterans Administration Affairs for disposition.

Authorization for treatment will be received through the medical coordinator at Topeka upon request in writing or, in cases of emergency, by telephone. Statements for services rendered will be sent to the Topeka office. Veterans appealing directly to the regional office for medical care may be assigned to a fee designated physician for treatment. In these instances written authorization will still be received through the Topeka office but treatment may be started at the request of the regional office. During hours when the office of the medical coordinator at Topeka is closed, physicians may request emergency authorization through the regional office of the Veterans Administration.

In general, the new agreement will provide fewer examinations but more treatment cases for Kansas physicians. It also provides, with the exceptions noted above, that all contacts between fee designated physicians and the Veterans Administration will be channeled through the medical coordinator at Topeka. It is hoped that this simplified program will eliminate difficulties that have been experienced in the past and that now the Kansas plan may operate more to the satisfaction of our members and to the greater benefit of the veteran.



President

EDITORIALS

The Use of Federal Grants for Health Purposes

Acceptance and distribution of federal public funds provides material for active discussion on almost any occasion. It became the subject of long deliberation by the Kansas State Board of Health and resulted in a resolution that will be of interest to every physician in the state. This resolution marks the beginning of a new era in public health planning.

Recall that the Congress has recently made many appropriations for disease control and has distributed these funds through state boards of health. Kansas at present receives large annual grants specifically assigned for the control of certain diseases such as tuberculosis, cancer, venereal disease, etc. Additional funds are disbursed through the United States Children's Bureau for maternal and child welfare. If this trend continues, there will apparently be even greater federal participation in local health activities in the future than there is at present.

This also involves greater federal control since appropriations are always limited by regulations that are set forth in Washington. Accepting federal money means also accepting federal control. For the most part these regulations are benign. By following the whims of whoever makes the regulations, they can come into serious conflict with local customs, as witness the administration of the EMIC program for example.

If the Kansas State Board of Health wishes to regain its autonomy, the proportion of local health money must be increased in relation to federal grants. Fortunately, this can be accomplished without sacrificing activities or budget reductions. The Board of Health in its recent far reaching decision has concluded that primary responsibility for public health in a community rests with the residents of that community. Aware that local and county governments can not always maintain an adequate health service, the State Board of Health is ready to assist where needed. Then after local and state resources have been exhausted, and then only, will financial aid be sought from the federal government.

Whatever else is accomplished by this resolution, or whatever faults it contains, this is a step toward returning health responsibility to the people of the state. It does not eliminate the use of federal money but provides for its acceptance in a logical manner and in general probably will provide a more adequate health service for the people of Kansas than has been previously received. The resolution is printed below.

"Inasmuch as it seems advisable for the Kansas State Board of Health to adopt a general policy with reference to the use of federal grants in aid to the State for health services, be it resolved:

"1. It shall be the general policy of the Kansas State Board of Health to encourage and insist upon all counties utilizing their entire tax levy authorized by law for health services before either state or federal financial support should be made available.

"2. Be it further resolved that the Kansas State Board of Health continue its policy of encouraging the establishment of full time county or district health units in order to facilitate the administration of public health services in a county or district health area.

"3. When state funds are *not* available for that service, it shall be the general policy of the Kansas State Board of Health to accept federal money for grants in aid to the state for health services when the needs of such funds are definitely established.

"4. Federal grants in aid will only be accepted by the Board for disbursement when the regulations accompanying them do not conflict with the laws of the state or the rules, regulations and policies of the Kansas State Board of Health."

The Program of Cancer Control in Kansas

About 20 years ago the Kansas Medical Society organized a Committee on Control of Cancer. This was the first committee of its kind in any state medical society in the United States. Under the leadership of Dr. C. C. Nesselrode, it started the work in postgraduate training for doctors in cancer and participated in the first educational programs directed toward an enlightenment of the public on facts concerning cancer. Today there are a number of organizations participating in the work in Kansas, and the program set for this year is far more ambitious than any attempted in the past. It is the purpose of this article to deal briefly with these various organizations, telling of the work they do, how they cooperate with one another, and further, to present in a little more detail the program of the Committee on Control of Cancer.

The State Board of Health has been cooperating with the state society committee for at least 10 years, and during that period their part of the program has grown tremendously. Almost yearly they have participated in and given financial support to the postgraduate lecture series on cancer given at five or six different locations over the state. They have from the start furnished statistical information of value concerning cancer in Kansas. One year they participated in the preparation of and bore the expense of an exhibit which was prepared by the committee, the Women's Field Army, and the State

Board of Health and shown in the scientific exhibit section of the American Medical Association meeting. They have likewise been most cooperative with the Women's Field Army in having prepared and printed literature for distribution through the Women's Field Army. They have also assisted the Field Army in putting on exhibits and in showing motion picture films on cancer at meetings arranged by the Women's Field Army. This past year a separate section on Control of Cancer has been established in the State Board of Health with Dr. Robert H. Riedel as director. Dr. Riedel is inaugurating a cancer registry in the state with which he plans to get initial and followup reports on all patients with cancer admitted to Kansas hospitals approved by the American College of Surgeons. Financial aid for clerical work necessary in participation in this program will be furnished participating hospitals. Dr. Riedel is a member of the Society's Committee on Control of Cancer. Dr. Beelman, executive director of the State Board of Health, is also very much interested in the cancer problem and has contributed a great deal of his time and energy to the work of the Kansas Division of the American Cancer Society.

The Women's Field Army of the American Cancer Society was organized in Kansas in 1936. With its work you are quite familiar. Each year the Kansas Women's Field Army has put on an educational campaign as well as a financial campaign throughout the state. Their part in the program of cancer control is perhaps the most important part of the whole program. Education of the lay public is recognized as an essential to lowered mortality rates in cancer. The Women's Field Army in Kansas has done an exceptionally fine job, not only in the educational programs they have presented each year, but also in the campaign to raise funds to carry on the work of the Field Army and of the American Cancer Society of which it is a part.

The Kansas Division of the American Cancer Society was organized this fall and Dr. Clifford C. Nesselrode was elected president; Mrs. J. E. Johntz of Abilene, the Kansas State Commander of the Women's Field Army, was elected vice president of this organization; Mr. Laird Dean of Topeka was elected chairman of the executive committee, and Dr. F. C. Beelman of the State Board of Health its secretary. The Kansas Division of the American Cancer Society has come into being as a part of a reorganization program of the American Cancer Society throughout the United States. Last year a large amount of money was raised by the Women's Field Army and the American Cancer Society. In Kansas alone something over $165,000 was raised. Forty per cent of the money raised in any state goes to the national organization and is diverted chiefly into large research projects approved by that organization. Sixty per cent of the money remains in the state. It is the responsibility of the State Division of the American Cancer Society to closely supervise the expenditures of the funds which have been entrusted to the organization by the public. With the large amount of money which was raised last year has come the opportunity to expend money for worthwhile projects within the state. All requests for funds or project applications must be approved by the local component of the American Cancer Society, and then must go to the Projects Committee and the Executive Committee of the Kansas Division for approval. Further, they must be forwarded on to the National Headquarters Division for approval before funds can be delivered for local projects in the state. The medical society is well represented in the Kansas Division of the American Cancer Society. The Women's Field Army is likewise well represented on the Board of Directors and on the Executive Committee of the Kansas Division. Mr. Laird Dean is only one of several prominent public spirited citizens on this committee. The State Board of Health is represented on the board of directors by both Dr. F. C. Beelman and Dr. Robert H. Riedel.

The Committee on Control of Cancer of the Kansas Medical Society has planned an elaborate program for Kansas this year. The committee has attempted to cooperate in every way with the State Board of Health, with the Women's Field Army, and the Kansas Division of the American Cancer Society, participating in the programs and the work of the latter two organizations. Its program will be discussed in several sections.

The most important part of the program of the state committee devolves about improving the services to the patient. With the raising of this large fund of money in Kansas last year has come a clamor for the development of cancer clinics. Some have been established, but those who have participated in the work of the Field Army and the American Cancer Society have come to your Committee on Control of Cancer asking for advice as to the organization of clinics in various localities. Clinics relative to prevention, diagnosis and treatment of cancer may be divided into three broad categories. First, are detection clinics in which periodic health examinations are performed in an effort to detect precancerous lesions or early cancer. To these clinics only patients who do not have symptoms of cancer are admitted. In the second category are the diagnostic clinics which are designed to complete the diagnosis in patients suspected of having cancer. In the third cate-

gory are the treatment clinics in which patients with cancer receive treatment.

Over a year ago the state society sent letters to each county medical society suggesting the formation of a cancer detection clinic in each county. There has been little response to this suggestion. A few so-called detection clinics which have been organized have really been diagnostic clinics rather than detection clinics. After much thought over a considerable period of time, the committee has reached the conclusion that cancer detection is best carried out in the doctor's office. Cancer detection, or the discovery of precancerous lesions or early cancer in individuals having no symptoms of cancer is best accomplished by thorough periodic health examinations. A superficial examination in a clinic may fail to detect precancerous lesions or early cancer, and if a patient suffering with such a lesion is assured that he does not have cancer, much harm can be done. With this in mind, the committee has prepared an examination blank for use in periodic health examinations. The blank has been prepared with the idea of conserving as much of the doctor's time as possible. The history part of the blank is to be filled out by the patient and this may be done before the doctor sees the patient. The physical examination findings can be filled in with a minimum of effort. The doctor will charge each patient a fee commensurate with the service rendered and the patient's ability to pay. Upon completing the blank, the top part containing the patient's name and other identifying data can be detached from the record and on it a summary of the positive findings made. This can be kept in the doctor's file. It is the hope of the committee that each doctor will send in the lower part of the blank, which contains no identifying data other than a number, to the Kansas Division of the American Cancer Society. For this, the cancer society will pay the doctor a small fee to cover his clerical and mailing expense. It is felt that the information which may be derived from a study of a large series of these blanks may be of great value in determining the merit of the periodic health examination in the prevention or early diagnosis of cancer. Your cooperation in this program will be greatly appreciated. These blanks may be used in the examination of any patient who presents himself for a complete physical examination or periodic health examination. They have been prepared by your committee and approved by the Council of the Kansas Medical Society, and printed and distributed by the Kansas Division of the American Cancer Society. As each doctor sends in the lower parts of the blanks after completing them, replacements will be sent to him from the central office in Topeka. If the doctor desires to have additional blanks to use as copies for his own files, he may purchase these without identifying numbers from the Kansas Division of the American Cancer Society.

It is the feeling of the committee that it is desirable to have diagnostic clinics established in all of the hospitals in Kansas which meet the standardization requirements of the American College of Surgeons. The committee has outlined certain minimum standards for such diagnostic clinics in Kansas hospitals. They are as follows:

1. Personnel.
   - A. Officers.
     1. Chairman, M.D.
     2. Lay Secretary.
   - B. Basic Staff (One or more of each of the following)
     1. Surgeon.
     2. Internist
     3. Radiologist (May be non-resident)
     4. Pathologist (May be non-resident)
     (When radiologist and pathologist are non-resident at least two surgeons and two internists should be on the basic staff to insure a minimum attendance of three.)
   - C. Consultant Staff. (Will consist of one or more of each of the following specialists.)
     1. Gynecologist.
     2. Otolaryngologist.
     3. Ophthalmologist.
     4. Urologist.
     5. Dermatologist.
     6. Orthopedist.
     7. Thoracic Surgeon.
     8. Plastic Surgeon.
     9. Anesthetist.
   - D. In hospitals in which all of the above specialists are not represented on the hospital staff exceptions will be made to staff requirements except in the case of the surgeons and internists. It is desirable for a non-resident radiologist or pathologist to attend the meetings of the clinic, but is not required if their reports are available on all patients and records presented in the clinic. All other members of the basic staff must attend 80 per cent of the meetings and all members of the consultant staff must attend 80 per cent of the meetings when notified of presentation of cases in their specialty.
   - E. Certified specialists are desirable in both basic and consultant staffs but are not essential for approval if not available.
   - F. The staff must be permanent, not a service rotated among various physicians throughout the year.

2. Meetings and Procedure.
   A. Meetings will be held at least twice monthly.
   B. The histories of all cases of tumor admitted to the hospital since the last meeting of the clinic will be presented to the clinic. Any suggestions of the clinic concerning the management of these patients will be promptly submitted to the attending physician.
   C. Patients with tumor or diagnostic problems in the hospital or from without will be seen in the clinic only when referred by their attending physician. In such cases examinations will be made by specialists designated by the chairman or director of the clinic and for such examinations each will render separately a statement for services rendered. Fees will be commensurate with the extent of diagnostic findings and recommendations will be promptly submitted to the referring physician.
   D. In all cases of cancer admitted to the hospital in which the clinic is organized and in all cases examined in the clinic, records will be kept on the approved Cancer Record Forms of the A. C. S. Records must include a systematic follow-up. A file must be kept both by name and by diagnosis. Report of all such cases will be made to the Cancer Registry of the Kansas State Board of Health, using the proper forms supplied for this purpose.

These standards are not nearly as rigid as those of the American College of Surgeons, but it seems important that diagnostic clinics be established in as many of our standardized hospitals as possible within the next few months. It is hoped that once these diagnostic clinics are established that they will strive to improve their facilities so as to meet the requirements of the American College of Surgeons for diagnostic tumor clinics, or better still, treatment tumor clinics. The Kansas Division of the American Cancer Society has already voted to allocate $500 to each hospital organizing a cancer or tumor diagnostic clinic which meets the standards of the Committee on Control of Cancer. It is thought that this $500 should help to defray the clerical expense incidental to the organization and operation of such a clinic.

The third type of clinic is the treatment clinic. Facilities are not available nor is the need present for treatment clinics in all of the hospitals in which diagnostic clinics may be organized. The committee does feel that there are certain areas in the state in which facilities for x-ray therapy and radium therapy should be made available. Letters have been sent to county medical societies and to councilors in these areas suggesting the development of personnel and physical facilities to provide more complete service for the cancer patient. It is felt that all areas in the state in which cancer treatment facilities are available should attempt to rapidly improve these facilities so as to meet the standards of the American College of Surgeons for tumor treatment clinics. These standards require in addition to the medical specialists on the staff facilities for both x-ray and radium therapy. To aid in the development of these facilities the Executive Committee of the Kansas Division of the American Cancer Society has budgeted funds which may be used in improving cancer therapy facilities in those areas in which project applications are approved.

The cooperation of every doctor in the state of Kansas is needed in this program to improve the service for the patient in early diagnosis and early treatment of cancer. Periodic health examinations following the form outlined in the blanks provided for these examinations are a very important part of this program. The organization and perfection of diagnostic and treatment tumor clinics in hospitals in Kansas will tend to improve the service for the cancer patient. If properly organized and carried out, they will tend to serve the function for which they are designed much better than will any clinics organized by the state or federal government. It is the feeling of your committee that there is no place for state medicine in this program of cancer control.

In addition to the program outlined above, there is a further program for the doctors themselves. A postgraduate course on cancer is being planned this year in cooperation with the Extension Division of the University of Kansas, and the Committee on Postgraduate Study of the Kansas Medical Society. Full day courses will be given in five different locations throughout the state. In addition to this, refresher courses are being planned at the University of Kansas. Data concerning these courses will be available soon, and it is felt that part of the expense to the doctor involved may be borne by the Kansas Division of the American Cancer Society. In addition, it is felt that it is very important to have each county medical society devote at least one program yearly to the subject of cancer. To aid in the presentation of such a program, your committee is preparing a suggested program including a series of exhibits on cancer of the colon and rectum, and motion pictures on the same subject. When these materials are ready you will receive information concerning them through the state society. Each month one section of the Journal of the Kansas Medical Society will be reserved as a cancer page. Other articles on cancer will appear in the Journal. Papers on cancer by outstanding men will constitute a part

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of the program at the annual meeting of the Kansas Medical Society.

A better informed public, a better organized and better informed profession, and the cooperation of all concerned can lead to a substantial reduction in mortality from cancer in Kansas.—*Howard E. Snyder, M.D., Chairman, Committee on Control of Cancer.*

Annual Meeting — May 12-15, 1947

The 88th annual session of the Kansas Medical Society will be held in Topeka, Kansas, beginning on Monday, May 12, and closing on Thursday, May 15, 1947. All scientific sessions and exhibits will be in Topeka's beautiful municipal auditorium. The scientific program is complete and promises to be of unusual interest to doctors in all specialties and those engaged in general practice. With practically all members returned from the armed forces, attendance for this session is expected to be greater than ever before.

Hotel accommodations will still be somewhat difficult to obtain and should be arranged for as early as possible. The larger hotels in Topeka are the Jayhawk, the Kansan, and the Capitol. Should any member be unsuccessful in obtaining reservations at these hotels, he will be sent a list of other smaller hotels on request.

As usual, the annual session will open with a golf tournament and a skeet shoot on Monday. The annual golf and skeet dinner has been arranged for that evening. Scientific sessions begin on Tuesday morning and continue through Thursday afternoon. On Wednesday evening the annual banquet, with a speaker of national prominence, will be presented.

Additional information regarding this meeting will be published in the Journal in succeeding issues, but it is again recommended that each physician begin now to plan for his visit to Topeka during the days of May 12-15.

The committee on arrangements for the 88th annual session is as follows:

General Chairman—Dr. Dwight Lawson
Scientific Program—Dr. Don C. Wakeman
Commercial Exhibits—Dr. L. A. Curry
Scientific Exhibits—Dr. Henry S. Blake
Arrangements—Dr. B. I. Krehbiel
Reception—Dr. Lucius E. Eckles
Publicity—Dr. Harry J. Davis
Entertainment—Dr. James D. Bowen
Auxiliary—Dr. Leo A. Smith

1947 dues are now payable. See the secretary of your county society.

Scientists Search for Amino Acid Mixture

Two factors, one cost and the other as yet unknown, are baffling scientists in their search for a simple amino acid mixture to provide proteins to the malnourished and ill.

An explanation of the complicated chemical procedures now required to produce amino acid preparations was given members of the scientific section of the Proprietary Association of America by Dr. Charles F. Kade, Jr., of Sterling Drug, Inc., early in December.

"Perhaps the simplest way to prepare a product to meet many of the specifications would be to make mixtures of synthetic and purified amino acids," he said, "but there are two serious disadvantages. One is economic. The cost of purifying or synthesizing sufficient quantities is still very high. Also, there is mounting evidence that proteins contain an unknown factor, perhaps another amino acid, the constitution of which is not known; or a necessary linkage, which cannot be synthesized by animals or humans at a rate commensurate with their needs."

Currently available amino acid preparations are chiefly derived from casein, the principal protein of milk, and lactalbumin, likewise found in milk. A flavor as strong as that of present casein hydrolysates is extremely difficult to disguise, however, and such products are generally designed for parenteral administration where taste is not a factor.

The National Research Council has recommended that normal individuals obtain not less than one gram of protein per kilo of body weight for adequate maintenance, but in sickness the demand for amino acids may be greatly increased. Since the malnourished or ill may be unable to obtain or absorb sufficient amino acids from food, research is being conducted to discover some ready means of supplying the acid.

Many Immune to Mumps

Thirty per cent of the American people probably have had mumps without knowing it, according to a report from medical scientists working at the University of Pennsylvania and Harvard University under a contract with the Commission on Measles and Mumps of the Surgeon General's Office, United States Army.

Mumps and measles usually are paired as childhood maladies, although the study was made on 50 groups of both children and adults. Each disease is contagious and is caused by a specific filterable virus, and one virus is presumably as widely disseminated in the population as the other.

The studies show that about 33 per cent of young adults have a probable acquired immunity to mumps, indicating some past infection of which they were unaware, and it is believed that one attack protects an individual against further attacks of the virus for the rest of his life. Statistical studies have shown that about 90 per cent of the American population suffer from measles at some time, and only 60 per cent are victims of mumps.

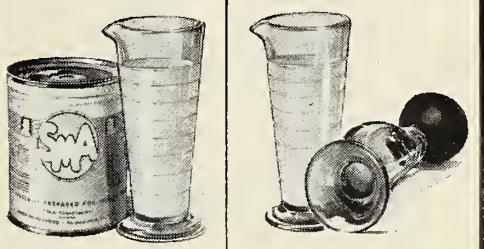
The immunity of a person was determined by the so-called "complement-fixation" test of the blood serum with mumps virus cultivated in incubated chicken eggs, and also by a skin test with similar material. In this hidden reservoir of acquired immunity, mumps seems to bear some likeness of poliomyelitis, also a virus disease of children. The technique of determining immunity may prove of considerable value in times of mumps epidemics when the relative susceptibility of a population can be determined before undertaking defense measures.

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COUNTY SOCIETIES

The 45th annual meeting of the Shawnee County Medical Society was held at the Hotel Jayhawk, Topeka, December 2. Dr. R. W. Emerson, who was elected last year, took over the office of president for 1947 with Dr. Orville Clark as secretary and Dr. Omer Raines as treasurer. Dr. Floyd C. Taggart was named president-elect. Three charter members of the group were present, Doctors W. S. Lindsay, W. F. Bowen, and W. L. Warriner.

Prof. L. R. Laudon of the geology department of Kansas University entertained with a talk on the Alcan highway, illustrated with colored movies.

* * *

Officers for 1947 were elected at a meeting of the Clay County Medical Society held at Clay Center December 11. The following were chosen: president, Dr. S. A. Anderson; vice president, Dr. Carl Ruff; secretary-treasurer, Dr. J. B. Stoll; censor, Dr. G. W. Bale; delegate, Dr. G. B. McIlvain. Dr. C. B. Trees of Topeka was guest speaker at the meeting, presenting a paper on intervertebral disc problems.

* * *

Dr. A. C. Baird was elected president of the Labette County Medical Society at a meeting held November 27, a Thanksgiving dinner held at the Parsons Quality cafe with Dr. J. D. Pace as host. Dr. Guy Cramer was chosen vice president; Dr. E. C. Beaty, secretary-treasurer; Dr. Pace, delegate. Speakers on the program were Dr. Paul E. Davis and Dr. O. E. Stevenson, who spoke on epilepsy and the work being done at the Parsons state hospital.

* * *

The monthly meeting of the Wilson County Medical Society was held December 11 at the Fredonia Coffee Shop with members of the Auxiliary as guests. New officers chosen were: president, Dr. F. A. Moorhead; vice president, Dr. Raymond Beal; secretary-treasurer, Dr. E. C. Duncan. Dr. W. T. Rich conducted a clinical pathological conference, and a group discussion followed.

* * *

Dr. Louis R. Haas was speaker at the December meeting of the Crawford County Society, held at Pittsburg December 19. His subject was "Allergy." The following officers were elected for 1947: president, Dr. C. M. Montee; vice president, Dr. C. W. Erickson; secretary, Dr. Paul B. Leffler.

* * *

Dr. W. N. Johnson, who is 93 years old and has been in active practice in Columbus for 58 years, was honored by the Cherokee County Socoiety at a meeting held at his home December 17. Guests of the society were Doctors Charles T. Reid, W. J. Sayles and F. L. Wormington of Miami, Oklahoma. Dr. Reid, who started his practice in Carona and practiced in Cherokee county for 20 years, was principal speaker and paid tribue to the veteran physicians of the society, especially Dr. Johnson.

A short business session was held and officers were named for 1947. Dr. Frank James was chosen president; Dr. H. A. Browne, vice president; Dr. R. B. Stortz, secretary.

* * *

The Pottawatomie County Society, at its meeting December 16, elected the following officers: president, Dr. Thomas Dechairo, Westmoreland; secretary, Dr. A. H. Bressler, Wamego.

Dr. L. K. Kimmer was elected president of the Douglas County Society at a meeting held at Lawrence December 12. Other officers named were: Dr. J. A. Holmes, vice president; Dr. M. L. Belot, Jr., secretary; Dr. R. B. Hutchinson, treasurer; Dr. H. P. Jones, delegate to state meeting. The membership decided that the incoming president should be the official society representative on the Lawrence-Douglas County Board of Health.

* * *

Members of the Miami County Society entertained their wives and secretaries at a dinner meeting at Paola December 20. The following officers were elected: president, Dr. Veryl Elson; vice president, Dr. William Brown; secretary-treasurer, Dr. Joseph Fowler; censor for a three-year term, Dr. P. F. Gately; delegate to the state meeting, Dr. C. A. Fisher; alternate, Dr. S. E. Woods.

* * *

A meeting of the Edwards County Society was held December 11 at the office of Dr. W. P. Stoltenberg. Officers chosen for 1947 were: president, Dr. R. T. Unruh; vice president, Dr. Stoltenberg; secretary-treasurer, Dr. F. G. Meckfessel; delegate to state meeting, Dr. R. E. Schnoebelen.

* * *

Dr. J. R. Prichard and Dr. Robert S. Young were re-elected to their respective offices of president and secretary-treasurer of the Bourbon County Medical Society at a meeting held at Fort Scott December 18.

Smith Clinic Entertains

Returning to a pre-war custom, the Smith Clinic held its annual dinner for physicians of the Pittsburg area at the Hotel Stilwell December 5. Approximately 50 physicians were present for the dinner and the scientific program which followed. Dr. E. H. Hashinger and Dr. Mahlon Delp, from the Department of Internal Medicine at the University of Kansas School of Medicine, presented the program. Dr. Hashinger spoke on "Disorders of the Thyroid Gland" and Dr. Delp discussed "The Cardiac Patient."

Streptomycin Quotas Lifted

Streptomycin, formerly supplied only under allocation by the Civilian Production Administration to selected depot hospitals and other government agencies, may now be ordered by all hospitals without restrictions, according to announcement made recently by Winthrop Chemical Company, Inc., one of the first distributors of the new antibiotic. Although still under government control, the drug will probably be made generally available through drug trade channels as soon as supplies are plentiful.

Motion Picture on Polio

A newly produced motion picture, "A New Horizon," has been filmed by RKO-Pathe for the National Foundation for Infantile Paralysis. The film, depicting a complete physical therapy department and the way it is used in the modern hospital, has been approved by the American College of Surgeons. It can be purchased or secured on a loan basis from the Foundation, 120 Broadway, New York 5, New York.

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MEMBERS

Dr. John Aldis, who has been practicing in Council Grove since last spring, is returning to hospital and institutional work this month and Dr. Norman E. Burkett, Geary County public health officer, will move to Council Grove to take over the former Haslam clinic facilities.

* * *

Dr. Walton C. Woods has returned to his practice in Manhattan after having spent two and a half years in the Army, 18 months in the Pacific. He is associated with the Student Health Service at Kansas State College.

* * *

Dr. W. M. Mills, Topeka, president of the Kansas Medical Society, was named president of the Western Surgical Association at a meeting held at Memphis, Tennessee, December 5-7.

* * *

Dr. Galen Tice of Kansas City flew to Havana, Cuba, last month to attend the annual meeting of the Inter-American Congress of Radiology.

* * *

Dr. R. B. Wilson, who has been practicing in Jetmore, has announced that he will soon accept a government position. He has resigned as county physician and county health officer.

* * *

Miss Elizabeth G. Brooks, the daughter of Dr. Edgar E. Brooks of Burden, was named "Typical American Nurse of 1946," and her picture was featured on the cover of the November issue of "R.N." During the war Miss Brooks spent three years overseas with the A.N.C., and she is now head nurse in the St. Louis Children's Hospital.

* * *

Dr. C. W. Walker, who has been practicing in Eskridge for almost 40 years, has announced his retirement and has moved to Topeka.

* * *

Dr. C. D. Updegraff, Greensburg, has announced his retirement from active practice and has resigned his position as county health officer. Dr. E. P. Deal, who recently moved to Greensburg from Dighton, was appointed health officer.

* * *

Dr. F. E. Wrightman, Dr. C. C. Hunnicutt and Dr. V. E. Brown, who have been practicing independently in Sabetha, have announced the establishment of the Sabetha Clinic. For the present the three doctors will compose the clinic, but more medical personnel will be added in the future.

* * *

Dr. Earl L. Mills, who has been taking postgraduate work since his release from military service last spring, has returned to his practice in Wichita.

* * *

Dr. R. R. Melton is now serving as mayor of the city of Marion.

Celebration Honors Dr. O'Donnell

Organizations and individuals of Junction City and Fort Riley joined forces in preparing for an Armistice Day celebration in Junction City to honor Dr. Fred W. O'Donnell, who has begun his 50th year of the practice of medicine there. The morning celebration was featured by a parade to the municipal building, where lunch was served to the thousands attending. The afternoon program was begun with a band concert and informal reception. During the evening Dr. O'Donnell was honor guest at the officers' club at Fort Riley.

Two of Doctor O'Donnell's oldest friends, General Jonathan M. Wainwright and the Rt. Rev. Robert Nelson Spencer, Bishop of the Diocese of West Missouri, headed the list of speakers for the occasion.

Among the organizations cooperating in arrangements were the Elks lodge, officers of Fort Riley, the American Legion, Veterans of Foreign Wars, and Union Pacific railroad groups.

New VA Director

Dr. Charles H. Beasley, former communications zone surgeon in the European theater, has been named branch medical director for the Veterans Administration in Kansas, Missouri, Arkansas and Oklahoma. In addition to directing the 10 V.A. hospitals in this area, Dr. Beasley will supervise the out-patient treatment of veterans in the four states.

Residencies at V. A. Hospitals

In announcing the appointment of Dr. Edward H. Hashinger, Kansas City, as assistant educational director and coordinator for the four V. A. hospitals in this area, Dr. H. R. Wahl, dean of the University of Kansas School of Medicine, recently disclosed plans for introducing residency programs in these four hospitals.

Under the "Dean's Committee" plan, the medical school, in cooperation with the Veterans Administration, will offer opportunities for physicians studying for specialist ratings. They will be immediately supervised by attendant doctors, with top supervision provided by consultants, all of whom will be members of the local county medical societies. Training periods will range from one to three years, depending upon experience and postgraduate work, and the program will be on a university basis with weekly clinical and pathological conferences.

This plan is now functioning at the V. A. hospital in Excelsior Springs, was recently inaugurated at Wichita, and will soon be adopted in Topeka and Wadsworth.

Death Notices

HENRY WALKER WEST, M.D.

Dr. Henry W. West, 90, who had practiced medicine a total of 58 years, died at his home at Yates Center November 15. He had been in poor health for several years and had retired from active practice about five years ago. He was an honorary member of the Woodson County Medical Society.

Dr. West received his medical education at Louisville Medical College, Louisville, Kentucky, and was graduated in 1880.

* * *

ROBERT LOUIS LEE, M.D.

Dr. Robert L. Lee, 43, a member of the Wyandotte County Medical Society, died November 28. A graduate of the University of Kansas School of Medicine in 1929, Dr. Lee had practiced in Kansas City since that time, except during World War II when he served in this country and overseas in the Army Medical Corps.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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Research on BCG Vaccine

Guided by recommendations of a conference of outstanding leaders in tuberculosis from the United States, China and Denmark, the United States Public Health Service, Federal Security Agency, will extend its tuberculosis research program to include studies on the effectiveness of BCG vaccine in preventing this disease.

Plans proposed for carrying on this research include establishment by the Tuberculosis Control Division of a single laboratory to produce the vaccine, extensive investigations throughout the country, especially in population groups highly exposed to tuberculosis, controlled study in a community containing 100,000 or more people to determine immediate and long-range results, and development of methods to standardize techniques of preparation of a potent and stable vaccine.

Studies were presented at the conference by Dr. Joseph Aronson, Henry Phipps Institute, Philadelphia, whose work was made possible by a grant from the Medical Research Committee of the National Tuberculosis Association, one of many research projects carried on through the cooperation of the United States Public Health Service.

From the studies presented it appears that BCG vaccination confers increased resistance for the limited period covered in research but is not 100 per cent effective.

Army Reports on Streptomycin

A report on the use of streptomycin in Army medical work was recently released by the office of the Surgeon General and published in the Army Medical Bulletin to give physicians everywhere the advantage of the Army's ability to compile and follow results.

The Army finds streptomycin effective against more than half the infective bacterial organisms ordinarily encountered by surgeons, but believes that early reports exaggerated its value since bacteria may develop resistance to the drug after a few days. In at least one case, test tube experiments showed a 100-fold increase of the resistance of an organism in ten days.

Balanced against the demonstrated value of streptomycin in suitable cases are some apparently toxic effects. Some of these, the Army reports, are probably due to impurities in the drug, but others seem to be specific for the drug itself. The most serious of these is what seems to be an irreversible damage to part of the eighth cranial nerve which appears when streptomycin is given in large doses by injection for more than 10 days, reported in two Army cases.

Organize Psychiatric Foundation

The medical and lay worlds were called upon this month to mobilize their resources behind the newly formed Psychiatric Foundation in the fight against mental ills in America. Sponsoring the foundation are the American Psychiatric Association and the American Neurological Society.

Five objectives have been announced: education of members of the psychiatric team, research, legislation, child psychiatry and education of the public.

The foundation explains that its first concern shall be the training of psychiatrists, psychiatric nurses, psychiatric social workers, psychologists, occupational therapists, and other allied workers, although that problem is complicated by lack of educational facilities. The 70 existing departments of psychiatry in medical schools must be built up and others must be established.

Research into the causes and cures of mental illnesses and emotional disorders has been superficial because of the lack of financial backing, and the foundation will establish a program of delving more deeply into this study.

All legislative procedures affecting the field of psychiatry will be studied, and psychiatrists will take the lead in stimulating interest in modernizing and broadening existing laws.

The development of child psychiatry is listed by the foundation as a separate objective to give emphasis to this particular field, since it has been most neglected in the past. In addition to the institutional aspect, child psychiatry will be promoted in schools through school physicians, teachers and leaders in the hope that educational work will correct faulty attitudes and habits at an early stage in life.

National Conference on Medical Service

The 20th annual meeting of the National Conference on Medical Service will be held at the Palmer House, Chicago, on February 9, 1947. Registration will begin at 9:00 a.m., and the program will include discussions in the fields of national affairs, economics and medical education. There is no registration fee and all physicians are invited to attend.

Medical Officers Needed

The United States Civil Service Commission has announced an examination for Medical Officer (Specialist) for positions in various medical fields in Washington, D.C., and vicinity. Salaries range from $7,102 to $9,975. Application forms may be secured from Civil Service regional offices or from the central office in Washington.

Centennial Session of A.M.A.

The American Medical Association, in announcing plans for its centennial session in Atlantic City, June 9-13, 1947, calls attention to the fact that only fellows of the A.M.A. and invited guests are eligible to attend. Those physicians who are not fellows of the A.M.A. and are planning to attend the session are urged to write immediately to the A.M.A., 535 North Dearborn Street, Chicago, for eligibility requirements.

ANNOUNCEMENTS

February 7—Written Examination, American Board of Obstetrics and Gynecology, Inc. Change in requirements now effective provides that case records must be forwarded to the secretary's office from 30 to 60 days after candidates have received notice of eligibility for admission to examinations. Candidates will be examined in both branches of the specalty of obstetrics-gynecology. For information address Paul Titus, M.D., 1015 Highland Building, Pittsburgh 6, Pennsylvania.

February 10-11—Meeting, Federation of State Medical Boards of United States, Chicago, Illinois.

March 17-20—Sixteenth Spring Clinical Conference, Dallas Southern Clinical Society, Hotel Adolphus, Dallas, Texas.

April 28-May 2—Annual Session, American College of Physicians, Chicago, Illinois.

MAY 12-15—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, TOPEKA, KANSAS.

June 9-13—Centennial Session, American Medical Association, Atlantic City, New Jersey.

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PHYSICAL REHABILITATION OF THE SEVERELY HANDICAPPED*

Earl C. Elkins, M. D.**
Rochester, Minnesota

There are many types of conditions related to the central nervous system which may cause severe disability. Of course many patients who have such disability cannot be helped by physical rehabilitation. In this presentation only those types of disabilities that are reasonably common will be considered. Some of these conditions have increased in frequency owing to the war, industrialization and the increase in the number of automobile accidents throughout the nation. Conditions which most commonly produce severe disability, which in the past frequently were not considered amenable to physical rehabilitation, are neurologic lesions resulting in paraplegia. These disabilities may result from injury to the spinal cord, benign neoplasms, infection, vascular accidents and degenerative diseases which are not progressive. Many of these patients, in the past, were considered to be permanent and complete invalids. Therefore, no particular treatment was attempted and the patient became totally dependent on his family or on society.

A great deal of information relative to the reconditioning of the severely disabled has been obtained from the armed services and certain civilian institutions. The war has greatly increased the interest in rehabilitation and within the next few years rehabilitation will receive much more attention in civilian hospitals than it has previously.

In the past physicians have been somewhat slow in attempting rehabilitation of paraplegic patients. This has been due partly to the lack of personnel and partly to the lack of knowledge of the methods to be employed. The information that has been obtained from the armed services and from certain civilian institutions indicates that much more can be done in this respect than has been done in the past and that more effort should be made to obtain equipment and personnel in order to reduce the number of hospital days in various types of illnesses and to care for the severely handicapped.

In order to handle the severely disabled to the best advantage the attitude of the physician and the family toward these patients must change somewhat from what it appears to have been in the past. The tendency has been to consider that many severely handicapped persons were hopeless cripples and that there was no particular use in attempting to increase further their abilities to do things for themselves or in assuming that they could earn their own living. Many of these patients have been left to their own resources or those of their family, and it becomes necessary for them to live the remaining portion of their lives entirely dependent. There are many for whom much can be done to make them more independent.

It must be remembered that some of these patients who have reasonably good care may have the possibility of living for a considerable time, if the disease is not progressive. Therefore, any increase of activity which may result from training of the patient will be a great advantage to him. Too frequently, physicians compare the ability of a disabled patient to handle himself with that of a reasonably normal person. It is not realized that even the ability of a patient to sit up in bed as compared with lying in bed or the ability of a patient to move from the bed to a wheel chair and to walk with supports and crutches or walk in a walker or lift his weight from one place to another in a sitting position is a great accomplishment as far as the patient is concerned. This is especially true of young persons. The normal person may not consider the difference between being in bed and being in a wheel chair as very great but if he analyzes the difference between lying in bed and not being able to move from the bed or

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**Section on Physical Medicine, Mayo Clinic.

room for weeks or months, on the one hand, and the ability, on the other hand, to ride around the house, or out of doors in a wheel chair, to eat meals with one's family in a normal manner, even the possibility of being able to walk with appliances, to get into an automobile from a wheel chair and in some instances to drive the automobile if it is equipped with hand controls, it is easy to realize that there is a great difference. It means that the patient may live a nearly normal life.

If members of the family of the patient are not taught that he need not be a complete invalid, they do nothing to encourage him to help himself and to be self-reliant within his ability. As time goes on, the patient becomes more dependent, his morale is poor, he becomes more demanding, and life becomes miserable for both the patient and those who surround him. Therefore, the patient and his family should be encouraged and assisted in increasing the patient's own activities; for example, brushing his teeth, combing his hair, turning the pages of a book, possibly dressing himself and taking care of himself in a wheel chair, writing, using a telephone, typewriting, answering the telephone and the like. The procedure will stimulate the patient to greater independence and in certain instances he may be retrained to the point at which he may reach economic as well as physical independence.

It should not be implied that every patient severely disabled from the various causes which have been listed is going to be physically rehabilitated to complete independence. The patient's condition should be carefully studied and in each instance a program should be outlined.

The length of time required for rehabilitation will depend partly on how much time is spent each day. If only short periods are devoted to exercise and other treatment daily, it is obvious that it will take many more weeks, perhaps months, to accomplish the same thing that might be accomplished in a shorter time if more time and effort had been applied each day. If disabled patients can be rehabilitated to any degree of independence it will alleviate the care which will be necessary in the home.

Various tests have been devised which are of importance in evaluating these patients. The Institute for the Crippled and Disabled in New York has definite tests for evaluating the physical ability of patients. This is done by having the patient do simple acts which relate to everyday living. He must go through various activities, such as toilet activities—opening a tube of toothpaste, brushing his teeth, shaving, washing and drying his hands, turning on the faucet, combing his hair, and brushing his clothes—and motions required to carry on normal eating activities; for example, sitting in a chair, eating, drinking, cutting meat, buttering bread, stirring coffee and the like. Other activities that he must accomplish are such as turning on the desk light, answering the telephone, opening a desk drawer, opening an envelope, drawing a straight line with a ruler, cutting along a line with scissors, copying names on a new sheet of paper or envelope and picking up a package from the floor. More advanced activities are those of walking, getting out of bed, getting up a curb, hanging up clothes and tying a necktie and shoestrings. Tests of this type may be used on almost any patient with conditions resulting in any type of disability.

In addition to the activities mentioned in the preceding paragraph, the patient should be carefully evaluated from the standpoint of muscular strength; what muscles are innervated, percentage of innervation, possibility of recovery of certain muscles over certain periods of time and age of the individual. It is quite obvious that the younger the patient the more muscular and wiry is his physique the better are the possibilities of developing his normal muscles and the probability that he will have more stamina.

When impairment of motor activity below a certain level due to a lesion of the spinal cord is present it is necessary to determine what muscles have normal innervation and to what extent these muscles may be developed to assist in the locomotion and movement of the rest of the body. It is obvious that if the patient is paralyzed from the cervical region down and has the use of only a few muscles of the upper extremities, there is a small probability that he can be expected to walk to any degree that is practical. However, if there are not too many complications such as decubitus ulcers, urinary infection and extreme debility, some patients can be rehabilitated so that they may lead a useful life and require comparatively little care. If the lesion is situated farther down in the spinal cord and if the muscles of the arms and some of the sacrospinalis muscles are functioning, the patient will be capable of being taught a great deal as far as handling himself is concerned and may be able to walk quite independently. Nearly all patients who have lesions of the lower part of the thoracolumbar segment of the spinal cord are potentially able to walk reasonably well if they do not have any muscular contractures or excessive reflex movement or spasticity. In cases of severe spastic paraplegia anterior rhizotomy can be employed to produce flaccid paralysis, which is more amenable to rehabilitation than is spastic paraplegia.

False promises should not be made and the patient should not be led to expect too much. If, after a careful evaluation of the patient's condition, it is decided that perhaps something can be accomplished

by way of increasing his activity, it should be carefully explained to him that what is to be accomplished is largely dependent on him and that it requires considerable effort on his part and a great deal of hard work to reach the point where he may be able actually to observe considerable increase in his ability to handle himself. It may require weeks and months of constant endeavor before he may reach his maximal ability.

The common complications of such disabilities, such as decubitus ulcers and urinary incontinence, also should be carefully evaluated. If the person has large decubitus ulcers he probably will not be rehabilitated to the point that he could be without such lesions. In most instances these ulcers may completely prohibit any extensive attempts at rehabilitation. Therefore, the possibilities of closing such decubitus ulcers should be explained to the patient and the physician should make sure that the patient has complete knowledge that such attempts may fail. Some of the ulcers will heal spontaneously when the patient resumes considerable activity; others require surgical care. It has been shown in the armed services that at least a certain percentage of these ulcers can be successfully closed.

When the patient is treated from the onset of his disability the decubitus ulcers may be prevented to a certain extent by good nursing care and the institution of early activities if it is at all possible.

If the patient has urinary incontinence he should be carefully investigated from the urologic standpoint. If there is any possibility of obtaining an automatic bladder, which completely empties through the use of the various urologic procedures, this should be attempted.

Attempts should be made to eradicate these complications before physical rehabilitation is attempted. Once the patient starts to work on the program of physical reconditioning, he should not have to stop for various periods owing to immobilization resulting from surgical intervention on the decubitus ulcers and urinary problems. In certain instances, however, all treatment may be carried on simultaneously.

It has been possible to reduce the severity of and the mortality rate from urinary complications by the use of the various types of chemotherapy and other urologic procedures. It should be kept in mind that unless the possible complications resulting from paraplegia are carefully attended by the various medical services to which they belong, physical rehabilitation cannot be adequately accomplished.

The use of the various physical agents other than exercise is not an absolute necessity. Therefore, it will not be considered. Training and physical reconditioning of normal and weakened muscles are the most important measures. These must be carefully prescribed and supervised. The duration and type will depend on the severity of the disability and the condition of the patient. Our procedure at the Mayo Clinic is to start the rehabilitation with the minimal amount of active and assistive exercise of normal muscles. In the beginning this is carried out with the patient in bed or on a plinth. Passive and stretching exercises are used to stretch contracted muscles or to prevent contractures. At first the treatment should last only fifteen to twenty minutes each day. The duration is increased as tolerance to exercise develops. Then the patient is placed on an athletic mat and exercised. By the time he has reached the stage in which he is exercising on the mat, he is usually exercising for an hour once or twice a day and this period may be increased to as much as six hours daily. In order for the patient to regain the ability to sit and stand, provided he has normal innervation of the arms, a definite program of exercise is required. He must regain sufficient strength of the muscles of the arm and shoulder girdle to lift and stabilize his trunk in a sitting position and to lift the weight of his trunk and if possible the body weight, in order to walk well. This requires a considerable period of training, using graduated resistive exercise. Therefore, the patient is started rather early to work with weights on pulleys; the amount of weight and exercise is increased gradually. If the lesion is below the cervical region the patient is started on exercise to develop particularly the strength of the deltoids, triceps, biceps, trapezii, pectorals and the latissimus dorsi muscles.

At the time these exercises are inaugurated the patient is taught to turn from side to side and to roll over, which is important for developing the abdominal muscles if they are functioning. If they are not functioning he learns to use his hands to turn himself. This assists him in becoming better able to handle himself in bed or in a wheel chair. After the patient has obtained sufficient strength in his arm muscles he begins to do exercises to strengthen muscles in the trunk and abdomen if they are functioning. These are first done with assistance and, as the muscular strength develops, he does resistive exercises. He becomes able to raise himself from the supine to the sitting position; he is taught to crawl on his hands and knees and to move his legs by shrugging his hips forward if he has paralysis from the hips down. Since innervation of the erector spinae muscles and the quadratus lumborum comes from rather high in the spinal cord, a lesion high in the thoracic portion of the spinal cord may still allow the patient to have sufficient function of the lateral abdominal and long erector spinae muscles to shrug the hips. This is an important movement as far as crutch walking is concerned. Therefore, in addition to crawling he is taught to walk on sawed-off crutches. This teaches the type of move-

ment that is produced by the muscles of the trunk in order to shift the legs forward in a standing position if the flexors of the hips are paralyzed. The crutches are about half the normal length. The patient sits with the legs extended in front of him, supports himself on his hands and shrugs his hips forward, pushing his legs in front of him. He learns to turn on the crutches by swinging his legs sideways on the mat. This type of exercise gives the patient a perception of the use of crutches.

While the patient is in a sitting position he lifts himself up steps of various heights. The first step used is about four inches (10 cm.) in height. The height is gradually increased until he is able to raise himself a distance of 12 to 16 inches (30 to 41 cm.). This exercise develops muscles of the shoulder girdle, depressors of the shoulder muscles and back, which enable the patient to lift himself from the bed to the wheel chair or from the floor to the wheel chair. When a patient is able to do most of these exercises, he is placed between parallel bars, either on a chair or on a stool. He then practices pulling down with his hands in such a manner as to raise his trunk as one would to rise from a chair or on crutches. He practices walking on his hands in the parallel bars. This is a difficult exercise but most young patients accomplish it readily if they have normal arms. When the patient reaches this stage braces are constructed for his lower extremities.

Preliminary training to strengthen all the functioning muscles is important because if the patient is given braces and crutches and attempts to walk before he has sufficient strength and is accustomed to swinging his body, he is likely to be fearful and unstable and may easily become discouraged.

The type of brace usually used is the locked-knee brace without the pelvic band. When the patient has his braces he walks in the parallel bars, first swinging one leg at a time and then later swinging both legs at once. After he has practiced several times in the parallel bars he is put into a walker and taught similar movements. After walking in the walker he is placed on crutches and in some instances on the so-called glider canes. He may be able to walk alone with this support if he is reasonably stable. If he is heavy and it has been difficult for him to learn to handle himself, an overhead track with a suspended harness in which the patient may be placed can be used. The harness prevents the patient from the possibility of injury. He learns to gain his balance and also learns self-reliance in maintaining his balance on his crutches. It reduces his reliance on someone having to hold him by a belt or hold him up.

The patient is taught to walk on crutches, using any one of the several crutch gaits. Usually the first one taught is the so-called tripod gait. The gait is slow and laborious. However, it maintains a tripod at all times and is stable. The patients who have severe disabilities (for instance, paralysis of the muscles of the legs, abdomen, and some of the muscles of the back) can learn to walk by using a tripod gait.

After the patient has learned this gait, he is taught the swing-through gait. He is taught to swing through first on the parallel bars, then in the harness and finally on crutches alone. This is difficult to learn and requires hours of practice with careful supervision. It is rapid and many persons using it are able to walk more rapidly than the normal person. If the patient has accomplished the slower gait and if possible the faster one, he can be independent on a level surface. He is then trained to get into and out of all types of chairs. If the patient has good function of his arms he is able to accomplish this reasonably easily.

He is taught also to climb stairs. There are many variations in teaching stair-climbing. Most patients can climb stairs if they have one railing. The patient uses both crutches under one arm and with the other arm he pulls on the rail to lift his feet up to the step above, either swinging one foot at a time or both feet at once. If the patient has strong muscles of the shoulder and arm he is readily able to learn to climb stairs and in most instances can climb them without the use of the railing; that is, by using the crutches alone. He is taught to go downstairs in the same manner; that is, backward.

When stair-climbing has been accomplished, the patient is taught to go over steps, heights equal to street curbs. When he is able to do this, the plan used at the Institute for the Crippled and Disabled can be followed. That plan is to teach the patient to cross a certain space within a given time and to go over a curb which would be similar to that when crossing an intersection with a signal light. In addition to getting in and out of chairs, climbing stairs and the like, various other everyday activities may be attempted. The Institute for the Crippled and Disabled has slanting ramps on which the patient may learn to walk on an incline. It also has steps built with a railing of the same height and width as that of street cars and buses. The patients are taught to get on and off these steps with reasonable rapidity. When this can be done the patient is independent as far as transportation is concerned and he may be able to earn his own living When the patient has accomplished all of these tasks he is sufficiently independent to be dismissed. Further rehabilitation would necessitate sending him for prevocational training or to a trade school. In many instances he will be able to return to the vocation in which he was engaged before he became handicapped.

The program that has been outlined implies that the patient has a considerable number of functioning muscles, which will permit him to walk. There are many conditions in which the paralysis may be so extensive that the patient cannot be taught to walk to a degree that would be practical. In these cases the patient may be equipped with braces and re-educated so that the remaining muscles may be strengthened and he may be rather useful to himself. Some patients can be taught to swing themselves from a bed to a wheel chair with little help. Some may be able to take care of their toilet with little assistance. The paralysis of some patients extends as high as the cervical region and the only muscles that are functioning are around the shoulder girdle and upper parts of the arms. Such a patient may be equipped with braces so that he can sit up easily and can be taught to feed himself with various types of simple apparatus and appliances, as well as to write, push his own wheel chair, answer the telephone and use a typewriter. Some of these patients who have functioning muscles of the arm may be rehabilitated so that they require little help in swinging from the bed to the wheel chair or from the wheel chair to the bathtub or toilet. Such patients are much better off and much less of a burden to their families or whoever is caring for them than patients who cannot do these things. In addition to these activities many patients may be able to swing from a wheel chair into and out of an automobile. Some can arrange to have hand controls installed in a car to enable them to drive. This makes them even more independent in many respects. The ability to be transported easily may in many cases allow these people to earn their own living.

In addition to rehabilitating the patient who has a disease that is stationary and irreversible, use of procedures similar to those outlined may hasten recovery in cases in which actual recovery of function over a period of months is possible and probable.

The equipment and space required for such a program of rehabilitation need not be elaborate or large. A set of parallel bars, wall weights, lead weight on pulleys, an athletic mat, walker (preferably steel), an overhead track, steps (which can easily be built by the hospital carpenter) and small platforms 18 by 24 inches (46 by 61 cm.) and of varying heights are needed. A room with such equipment should be available in any department of physical medicine because it can be used in many conditions other than those mentioned.

It should be emphasized that physical rehabilitation of the severely handicapped, particularly paraplegic patients, requires close co-ordination between the medical services; for example, the neurologist, internist, neurosurgeon, orthopedist, urologist and the physician in physical medicine. The social service worker, psychologist and specialist in vocational training may need to be consulted.

Technical assistance is important. A well-trained physical therapy technician under the guidance of a physician can train these people well. She, as well as the physician, must have a good knowledge of muscular function. Together they must have a definite program of treatment. The training of the patients cannot be routine. It requires interest, patience and willingness, on the part of the therapist, to spend considerable time with each patient. She must have the ability to treat the patient as a whole and, with the guidance of the physician, to make changes in the program which will insure satisfactory progress of the patient. A knowledge of muscular function, reasonable ingenuity, common sense and the realization of the fact that any physical improvement these people gain is extremely important to them, are all that are necessary as far as specialized training is concerned. It must be emphasized, however, that this training of patients cannot be done satisfactorily at home. It is not possible to train the patient and his family in a few hours. They do not have the general and specialized knowledge to do an adequate job. Usually under such a regimen the patient becomes discouraged and gives up.

SUMMARY

Training and rehabilitation of severely disabled patients requires some special skills. It cannot be relegated to untrained persons. However, common sense, patience, ingenuity and the ability of the physician to put himself mentally in the position of the patient will have much to do with whether the physician continues to have a defeatist attitude with regard to rehabilitation or whether he attempts to help the patient to gain even a small degree of independence.

It should be emphasized that elaborate equipment is not necessary. If the patients who receive training are carefully selected, long periods of hospitalization may not be necessary. With a basic knowledge of muscular function on the part of the physician and with the help of a trained technician, many procedures can be evolved without the necessity of special training in re-education of muscles and in general exercise.

It also should be pointed out that patients or their families cannot be taught in a few easy lessons how to carry on rehabilitation unless the patients have been partially trained before treatment is attempted at their homes.

Not all patients who are severely disabled are going to be successfully rehabilitated or even par-

tially so. In some cases, complete failure will result; however, if the activity of only a relatively small percentage of these patients is returned to somewhere near normal, the effect will be worth while. Many of the patients need not lead the life of a complete invalid and many can be made less dependent on their families and on society than they would be without training.

CARCINOMA OF THE RECTUM—A REVIEW OF 215 CASES*

Thomas M. Johnson, M.D.

Kansas City, Kansas

Sixty per cent of all malignancies of the large intestine are found in the rectum and recto-sigmoid[1]. Carcinoma of the rectum ranks fourth in frequency of all the malignancies of the body, and kills 9,000 persons every year in the United States[5].

This report is a review of 215 patients with carcinoma of the rectum and recto-sigmoid seen in the University of Kansas Hospitals during the period from January 1, 1930, to December 31, 1945. There were 139 males (64 per cent), and 76 females (36 per cent). The youngest patient in this series was 26 years of age (two cases), and the oldest was 84. The average age was 59 years. There were 13 patients under 40 years of age or six per cent of the total. Cancer of the rectum is not uncommon in young adults. In one series of patients reported 16 per cent were found to be under 39 years of age[3].

SYMPTOMS

The most constant symptom recorded in this series was some abnormality of the stool. Eighty-two per cent of our patients complained of blood, mucous, or pus in the stool, and 43 per cent had noticed a change in the caliber of the stool. Approximately one-half of the patients complained of increasing constipation with occasional periods of diarrhea. Frequent urge to move the bowels with small, unsatisfactory stools and tenesmus was often reported, especially with low lying lesions. Many histories recorded the patient's observation that it was necessary to keep the stool loose with daily laxatives to prevent abdominal fullness, gas and bloating, and a heavy feeling in the abdomen and rectum. Late symptoms were loss of appetite and weight, anemia, or discharge of gas and feces from the bladder and vagina. Carcinoma of the rectum usually begins in the ampullary portion and, because of the large caliber of the bowel here, obstructive symptoms occur late in the course of the disease. Obstruction was present in only 17 patients of this series, or seven per cent of the total. Two patients had no symptoms referable to the gastrointestinal tract. These two patients were admitted on the medical service for other conditions and the diagnosis was made by palpating a rectal mass on routine physical examination.

DIAGNOSIS

The most important single factor in making a diagnosis of carcinoma of the rectum is digital examination. A proper digital examination will reveal 80 per cent of these tumors, and sigmoidoscopic examination most of the remainder, yet only about one-half to two-thirds of the patients are resectable when seen in the clinics throughout the country. In 78 per cent of our patients, the lesion could be felt by digital examination. In 18.3 per cent it could not be felt, but could be seen through the 25 centimeter sigmoidoscope, and in only 3.7 per cent, where the lesion was at the recto-sigmoid junction, was it necessary to make the diagnosis by barium enema.

Many patients have lost their chance for cure because a doctor has regarded a negative finding of a barium enema as conclusive, and has failed to do a proper digital and sigmoidoscopic examination. Most radiologists emphasize that they cannot adequately visualize the rectal ampulla with a barium enema. This is particularly true of the region about 5 to 8 centimeters in length in the recto-sigmoid flexure where, because of redundency, lesions cannot be seen, and in the lower one-third of the rectum where the walls are fixed. Biopsy through the sigmoidoscope should be done in all cases and repeated if negative.

The hospital records indicated previous incomplete examination in 29.7 per cent of the patients in this series. Forty patients were treated prior to admission for anemia, weakness, colitis, or other medical condition; eighteen patients were treated for hemorrhoids by injection or suppositories; and six patients had hemorrhoidectomy within the last six months prior to admission. The physical examination records show that all of these patients had lesions which were either palpable by digital examination or could be seen through the sigmoidoscope. Buie[14] has reported that in his experience one out of four patients with carcinoma of the rec-

*From the Department of Surgery, University of Kansas, Kansas City, Kansas.

tum had a recent minor rectal operation and the unsuspected cancer had been overlooked at the time of the operation. In a series reported by Cattell[2] 16 per cent of the patients with cancer of the rectum had had a recent anal operation. A common error of doctor and patient alike is to attribute red blood in the stool to hemorrhoids. Any patient complaining of "hemorrhoids" should have a thorough digital and proctoscopic examination to exclude cancer.

Metastases from other abdominal malignancies or direct extensions into the rectum of lesions in the cervix, uterus, bladder, or prostate and chronic infections, such as ulcerative colitis, amebic granulomas, and lymphogranuloma inguinale, must be differentiated from primary rectal carcinoma by a complete history, examination, and biopsy.

TREATMENT

Patients were studied in the hospital an average of five days before operation. During this time sigmoidoscopic examination and biopsy were done and additional examinations including chest x-ray, renal function, blood chemistry, proteins, and cardiac status were made. Patients were given high protein, high carbohydrate, low residue diet with supplemental vitamins. Transfusions were used to insure a hemoglobin of at least 70 per cent before operation. Daily enemas were given together with epsom salts when necessary but since we having been using succinylsulfathiazole, its slight laxative effect does away with the necessity of laxatives in most patients.

Spinal anaesthesia was used almost without exception, in the earlier cases with novacaine crystals, and later changed to longer acting pontocaine and dextrose. This was supplemented at times with cyclopropane or nitrous oxide for the perineal dissection when the operation was difficult. A Foley-bag catheter was inserted into the bladder and allowed to drain during the operation. An intravenous infusion of five per cent dextrose was started in an arm vein at the beginning of the operation. Blood was given during the operation in nearly all cases.

In the post-operative treatment fluids and blood were given as needed, usually from 2500 to 3500 cc daily, with vitamin B and C and amino acids if indicated. The patient was given fluids by mouth as soon as he was able to take them. Deep breathing exercises and frequent changes of position were used. An indwelling catheter was usually left in the bladder for the first three days. On the second or third post-operative day, depending on the amount of abdominal distension, a catheter was sutured into the colostomy for decompression. The perineal pack was removed on the fourth or fifth day and the perineal wound was irrigated daily with a 1:6000 solution of potassium permanganate. Patients were usually allowed out of bed after the second or third post-operative day.

Operability, resectability, and curability are determined by consideration of several factors. Age is not a deciding factor. Patients 75 to 80 years of age tolerate combined abdomino-perineal resections of the rectum very well. In general the rate of growth is faster and matastasis earlier in young adults, and the prognosis not as good as in older age groups. Carcinoma is often not suspected in young persons so that lesions are farther advanced when diagnosed. Duration of symptoms is not important in every case. Patients with symptoms as long as two years often do not have metastases to nodes and are resectable without evidence of extension.

In Swinton and Higgenbotham's series[11], the duration of symptoms did not seem to have any significant relationship to the resectability of the lesion. In a group of their patients in which radical resection was done the average duration of symptoms was nine months, and in an inoperable group, the average was eight and one-half months. The size of the tumor and fixation to surrounding structures are not always reliable as prognostic signs. A large cauliflower or papillary growth may not metastasize as early as the small penetrating, ulcerated lesion. Fixation of the tumor to surrounding structures may not prevent complete resection. Fixation may be due to inflammatory reaction, and the rectum may be removed easily from the hollow of the sacrum on finding the line of cleavage. When there is fixation to the bladder, uterus, or vagina, a portion of one or all of these organs may be resected with the rectum without increasing the operative mortality appreciably. Also the preoperative impression of fixation may not be borne out by the findings when the abdomen is opened. The presence of enlarged lymph nodes is not a contraindication to radical resection, because it is impossible always to determine by palpation of nodes if they contain tumor tissue. Many times the large, palpable nodes are due to inflammatory reaction. One series of 1,800 patients with carcinoma of the rectum reported by Lahey[9] showed a five year non-recurrence rate of 90 per cent in patients with no gland metastases, no direct extension metastases, and no blood vessel invasion, a 37 per cent five-year non-recurrence rate with only gland metastases, a 30 per cent five-year non-recurrence rate with gland and direct extension metastases, and only a 14 per cent five-year non-recurrence rate in those with blood vessel invasion.

Operability depends upon the experience of the surgeon, the rate varying between 30 per cent and 70 per cent. A high percentage of patients is operated upon by the experienced surgeon. Operability rates have been recorded as follows: Mayo Clinic 70 per cent, Rankin 71 per cent, Lahey Clinic

70 per cent, and T. E. Jones 68 per cent[7]. Resectability rates on the other hand, vary between 40 per cent and 60 per cent. The Mayo Clinic reports a resectability rate of 53 per cent[10], and Coller and Ransom, 56.1 per cent[4]. In our series of 215 patients 178 or 82 per cent were operated upon, and 101 of the lesions or 56 per cent were resected. Thirty-seven patients were not treated because they were obviously incurable or refused operation. Table I shows the type of operation performed.

TABLE I

Type of Operation	Number
One Stage Combined Abdomino-Perineal Resection of the Rectum	79
Two Stage Combined Abdomino-Perineal Resection of the Rectum	15
Colostomy	69
Exploration only	4
Enterostomy	2
Lockhart-Mummery-Balfour Operation	1
Local Excision Polyp with Fulguration of Base	4
Colostomy with Posterior Resection	2
Complete Colectomy	2
Total	178

Of the 101 patients with resectable lesions eight had metastases in the liver or in the aortic nodes and were considered palliative resections. The one-stage combined resection (Miles) was done in 79 or 44.3 per cent of the patients operated upon, and the two stage resection in 15 or 8 per cent. Our series includes one Lockhart-Mummery-Balfour resection which was done in a patient with a small lesion at the recto-sigmoid junction. Local excision of a malignant polyp with fulguration of the base was done in four patients. We feel that in very early cases in which the patient can be examined frequently for signs of recurrence, local excision of a polyp is a safe procedure when the base of the polyp does not contain cancer cells. Palliative operations accounted for 71 cases or 39 per cent. Colostomy and posterior resection were done as palliative measures in two patients who were considered very poor risks. Exploration and colostomy only were done in 69 patients as palliative measures where the primary tumor was not resectable and obstruction was impending. Complete colectomy was done in two patients following combined resection of the rectum, when many polypi were found in the remaining colon, some of which were malignant when biopsied. These patients with complete colectomy are both alive and well five and two and one-half years following operation.

The one-stage Miles procedure is the operation of choice in most of the clinics in this country at this time when patients are in good condition and show no obstructive symptoms. The Lahey Clinic, however, still uses the two-stage operation described by Lahey in 1935 in about 15 per cent of the cases, particularly in those patients who have obstructive symptoms or who have an abscess or inflammatory process associated with the carcinomatous lesion[9]. Operative procedures aimed at the preservation of the anal sphincter, as advocated by Wangensteen[12], Dixon [13], and Fallis[6] are condemned by Lahey[9] who believes that operations on the rectum and recto-sigmoid should remove the greatest amount of bowel tube, greatest number of adjacent lymph nodes, and the greatest mass of blood vessels, if they are to give the best chance for cure. Buie[14] believes that simple excision of rectal polyps and fulguration of the base should be reserved for those lesions that are situated on the posterior wall of the rectum, and below the peritoneal reflection. He believes that only 5 to 10 per cent of these lesions fulfill the above criteria.

PATHOLOGY

In Table II is listed the type of lesion as reported by the pathologist. No attempt was made to grade these lesions as to degree of malignancy.

TABLE II

Type of Lesion	Number
Adenocarcinoma	156
Mucoid (Colloid) Carcinoma	25
Schirrous Adeno-Carcinoma	3
Papillary Carcinoma	12
Malignant Polyps	19
Total	215

It is interesting to note here that in nine of the patients for whom combined resection for carcinoma of the rectum or recto-sigmoid was done, a second carcinoma of the left half of the colon was found. In four of these cases, a well developed carcinoma was found separated from the original tumor by normal colon. In five patients polyps were found that had undergone malignant change.

DEATHS

There were 14 hospital deaths following combined resection during the period covered in this report, or 14.8 per cent. In the last 40 cases, however, the death rate was reduced to 8.9 per cent. There were ten deaths following the one-stage combined resection or 12.6 per cent, and four following the two-stage operation or 26.6 per cent. The causes of death are listed in Table III.

TABLE III

Causes of Death Following Combined Resection

Wound Infection and Peritonitis	4
Hypertensive Cardio-Vascular Disease and Cardiac Failure	2
Renal Failure with Wound Infection	2
Wound Infection, Pelvic Abscess, and Cardiac Failure	2
Pulmonary Embolism	2
Transurethral Resection	1
Cardiac Failure and Shock	1
Total	14, or 14.8%

Infection was the chief cause of death in the earlier cases, but this has decreased in later years with better pre- and post-operative care. One patient died following a transurethral resection for urinary obstruction that developed after the combined resection. There were 16 deaths following colostomy alone, or 23 per cent. The high mortality in the colostomy group of patients reflects their poorer condition.

COMPLICATIONS

The non-fatal complications following combined resection are listed in Table IV. Here again infection has been the most troublesome complication. It has been less frequent and severe since the advent of the sulfonamide drugs and penicillin and better pre- and post-operative care.

TABLE IV

Non-Fatal Complications Following Combined Resection

Wound Infection	17
Wound Disruption	2
Phlebitis	2
Embolism	2
Bleeding Perineal Wound	1
Bronchopneumonia	4
Intestinal Obstruction	3
Severe Ileus	5
Atelectasis	2
Urinary Tract Infections	3

Obstruction due to postoperative inflammatory adhesions occurred three times. It was relieved by the use of the Miller-Abbott tube once, and in two cases ileostomy was done. Atonic bladder is expected in many patients, as is a certain degree of paralytic ileus, but these are usually not troublesome complications after the fifth to seventh postoperative day.

RESULTS

In compiling the end results of radical resection of the rectum, the 54 resections done after 1940 obviously could not be used. The series of 38 radical resections done in the period from 1930 through 1939 were reviewed from the standpoint of end results. There were seven operative deaths, or 18 per cent. Fifteen, or 39.4 per cent died of recurrence of the tumor. Fourteen patients or 36.8 per cent were alive and well for 5 to 15 years. Of the 31 patients who survived the operation, 45 per cent showed no recurrence during this 5 to 15 year period. One patient died of another cause, and one could not be treated.

CONCLUSIONS

1. A series of 215 cases of carcinoma of the rectum is reviewed.

2. Experience with this series of patients emphasizes the importance of taking a careful history, and making a complete examination on all patients complaining of rectal disease regardless of age.

3. In this small series of cases the improvement in pre- and post-operative care and standardization of technique has shown a reduction in the operative mortality of more than 50 per cent.

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BIOPSY

C. Alexander Hellwig, M.D.

Wichita, Kansas

Biopsy is the examination of tissue from the living body. In spite of limitations and disadvantages, biopsy is the only reliable method for the early diagnosis of cancer. It should be employed on the slightest suspicion of malignancy.

Biopsy involves three steps. First, the removal of a piece of the suspicious lesion; second, the preparation of this tissue for microscopic examination; and finally, the microscopic diagnosis. Each of these procedures is equally important for the success of a biopsy and since each one is, as a rule, carried out by different individuals, close cooperation between these three individuals is imperative.

Proper selection and handling of the tissue material will avoid the most common pitfalls in biopsy. The surgeon who removes a piece for histologic examination must be certain that it is not from the neighborhood of a lesion, but that it contains a portion of the essential lesion. He also should avoid frankly necrotic, hemmorhagic or inflamed areas of the tumor. Those secondary changes may obstruct the underlying pathologic process so much that an exact diagnosis is impossible.

The invasion of a neoplasm into its surrounding tissue is one of the surest signs of cancer; therefore, an ideal biopsy should contain some of the adjacent normal tissue.

Many instruments have been devised and improvised for taking biopsies. A sharp, thin-bladed knife is still, however, the most satisfactory instrument since it causes the least injury to the biopsy tissue as well as to the patient. Scissors squeeze the tissues too much and electrocautery may completely change the microscopic appearance of the cells, particularly if the tissue piece is soft or very small.

During and after the removal, the tissue should be handled with the greatest care. Squeezing with forceps will cause, for instance, in lymph nodes such a distortion of delicate cell structures that the tissue may become useless for microscopic study.

After the biopsy has been taken, proper fixation should be done without delay. The best fixing fluid is neutral 10 per cent formalin which can be obtained from every drug store. It is advisable to have a colorless, wide mouthed bottle with this solution on hand before taking a biopsy and to drop the tissue into the fixing solution as soon as it is excised. The bottle is to be labeled with the name of the patient and should be sent to the laboratory together with a record slip giving the name and age of the patient, source and duration of the lesion, and the clinical diagnosis. Without this information, the pathologist often cannot arrive at a definite decision regarding malignancy of the lesion. In spite of similar morphologic structure, tumors may behave entirely differently, depending on the location of the tumor and the age of the patient.

The microscopic sections should be made, as a rule, perpendicular to the surface of the lesion. Sections made parallel to the surface are often very misleading, especially in skin tumors. If the surgeon places the freshly removed biopsy specimen on a small piece of blotting paper with the surface up and then immerses it in the fixing fluid, the technician will know how to place the piece on the microtome for sectioning.

There is much disagreement concerning the method of sectioning biopsy material. The advantages and disadvantages of rapid histologic methods have been discussed again and again. Tissue pathologists with a good morphologic memory will agree that most tumors can be diagnosed just as well from rapid supravital sections as from the thinnest paraffin sections. However, the desire for speed should never jeopardize the correctness of the diagnosis. In a few instances it may be necessary to make many paraffin sections from different areas, employ various staining methods, study slides of similar lesions, and consult other pathologists before a diagnosis can be made. In these exceptional cases if the pathologist tells the surgeon that he is unable to diagnose the tumor from rapid sections during operation, no harm will be done, and certainly no surgeon will regard the pathologist as incompetent on account of his caution.

Paraffin sections should be made in every tumor case, regardless of whether or not a definite diagnosis has been made from rapid sections during operation. They are necessary, first, for a final check on the rapid tissue diagnosis; second, for permanent records; and third, for photomicrography. With modern processing methods, paraffin sections of the best quality can be finished not later than 24 hours after receiving the specimen in the laboratory.

BIOPSY

Biopsy, providing microscopic proof of the nature of a tumor, is essential to accurate tumor diagnosis.

An accurate diagnosis is essential to proper treatment. Without it malignant tumors may be wrongfully managed as benign tumors and vice versa. With it the surgeon is better able to select the most appropriate type of treatment, be it surgery, X-rays, radium or some combination thereof.

Biopsy may involve the removal of all or only a small part of a tumor. Biopsy technic varies with different tumors and in different parts of the body[1]. As a rule, tissues for microscopic examination should be removed by the surgeon who will perform the definitive surgery when that is indicated, or who will cooperate with the radiologist when radiotherapy is indicated.

Rapid technics by supravital staining of fresh tissues or stained frozen sections at the time of operation together with the surgeon's and pathologist's diagnosis on the gross specimen usually provide the necessary information in breast tumors and in many tumors in other locations.[2].

Biopsy should be regarded as essential in every tumor. Without microscopic diagnosis cancer statistics are inaccurate. Improper biopsy technics, however, can and do lead to harm. One negative biopsy may be wrong. Biopsy must be planned and timed to fit in properly with definitive treatment and to avoid dissemination of cancer cells by rough handling of tissues or poor technic.

1. See "Surgical Biopsy" by Cushman D. Haagensen in "Treatment of Cancer and Allied Diseases" (Pack & Livingston).

2. See "Biopsy" by C. A. Hellwig, page 66 this issue.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

An encouraging sign of the shift in public opinion away from state control of our lives and a spoon-fed millenium is the recent publication of some articles opposed to socialized medicine. These have appeared spontaneously and are published solely on account of the reader interest they inspire.

The latest and in many respects the best appears in the January Better Homes and Gardens by Michael Wright. His conclusions, reached after a searching analysis, are most logical.

"A person who needs help should have it. So far as possible he should make his own way. Beyond that he should have help. But not in a manner that will tear down the quality of medical care to the rest of us.

"Not in a manner that will destroy private practice.

"Not in a manner that will destroy the voluntary hospital system.

"Not in a manner that will give one man control over medical research and education.

"Not in a manner that will bind the physician in political slavery.

"Not in a manner that makes men leeches, hypocrites, and servile to their government, without the will to fight unceasingly for freedom."

If our profession maintains its freedom, it can and will create the finest system of medical care in the world. The country today is teeming with new ideas that are rapidly being put into action by organized medicine to improve medical care. There is more open-mindedness and a greater spirit of unity than at any time in the history of Kansas medicine.

Our only danger lies in a feeling of false security inducing us to let up in the fight against the Wagner-Murray-Dingell bill.



President

EDITORIALS

The Physician's Place in Medical Problems*

While we are celebrating this 25th anniversary of the South Central Section of the American Urological Association, we should not be unmindful of problems which confront our home communities today.

Since many things have happened in many places during the last few years to upset traditions in our country, it would seem only fair that we should devote some thought to the solution of our community problems.

Whether we like it or not, we have already been drawn into the conflict that rages between the proponents and opponents of social and economic reforms.

We can no longer be isolationists or maintain a position of status quo and uphold the oath of Hippocrates and the honor of our profession.

I have but one objective in presenting this discussion. I would like to convince you that it is your task as well as mine to enlist the support of each member of your County Medical Society and the wife of each member for the solution of a problem which confronts your community, to the end that those members will enlist the aid of other professional and civic organizations to carry to the public irrefutable facts concerning the disadvantages of such legislation as has been proposed by Messrs. Wagner-Murray-Dingell.

I am not going to spend time here to give you those facts. If you are not already familiar with answers which refute every promise of the proponents, there is an abundance of evidence at your disposal.

In addition to the concern I have for the welfare of my patients and potential patients, I have two very personal reasons for being interested in this problem. Before giving you those personal reasons, I would like to tell you why I think the time is so ripe for us to take the offensive in this conflict.

In my opinion the proponents of social reform have created a decade of doubt. A decade of drift, a drift toward the decay of our democracy and the death of free enterprise.

While the guns of battle were blasting away the ramparts of despotic control abroad, the power hungry schemers for social reform lost no opportunity to plant their ideologies in the minds of the American needy. They knew full well that ideas could not be destroyed by gun fire. They knew also that if social reform was to succeed it would be because a majority of the people would believe in their ideologies.

They lost no opportunity to whet the public's appetite with utopian promises. They developed pressure groups which are still trying to satisfy those appetites with more and more promises. In their efforts to satisfy these appetites they have developed regulatory measures which make it impossible for producers to produce or for consumers to find things to consume.

Our problem today is to decide whether or not there is enough logic in the ideologies of democracy to justify our efforts to maintain it.

We should not be so concerned with the conclusions of the American public as we are with the methods by which they arrive at such conclusions. You and I know that the public has been saturated with distorted facts concerning virtues of the Wagner-Murray-Dingell bill.

It has often been said, "The weaker the argument the stronger the words." In reviewing the arguments presented by proponents of social reform, I am reminded of the minister who found this notation penned in the margin of his sermon notes, "Logic is weak here, yell like hell."

Before entering upon a discussion of methods to combat social reforms, we should understand the reasons why we have been drawn into the conflict and know how the social reformers have developed their program.

As busy as you may be in the practice of medicine you should not fail to realize that sinister influences and questionable political philosophies underlie much of the current legislation and restlessness in our country today. Much more than the practice of medicine is demanded these days of the American physician.

From an analysis of past developments and legislation designed for the future, it would appear, that back of the flag wavers and evangelists for social reform might be a motive. Further analysis reveals there is a motive. A desire for power by individuals who would reconstruct the American way of life.

Evidence is abundant, all around us, as proof of the thoroughness with which these power hungry schemers have made preparations for the acceptance of their revolutionary ideas.

Your community and mine are already in the throes of a revolutionary doctrine called "the domestication of individualism." A doctrine which makes the citizen more subservient to the state.

*Presented by the president of the South Central Section of the American Urological Association, Dr. O. W. Davidson, Kansas City, at the 25th Annual Session, Hot Springs, Arkansas, September 30, 1946.

In the 47th Chapter of Genesis the story is told of the men who went to a ruler and told him they were without bread for their families and feed for their stock. He gave them bread and took control of their stock. On another occasion when they had no stock, he gave them more bread and took over their farms. This went on until finally they were totally subservient to the government of that land.

Obviously these power hungry schemers figure they will be luckier than their predecessors. They calculate that they can make the great dream of power a reality by adding their wisdom to the inherited benefits of their predecessors.

Too many Americans are unaware of the fact that Revolution is a department of knowledge, which has its own philosophies, its own text books and its own intellectual instructors who set down the techniques to be employed. It should not be difficult for anyone to understand how compulsory health insurance fits into the schemes of social revolution.

It is alarming to note how many things have already been accomplished which abrogate the Preamble of our United States Constitution. A congress which would reject an entire collection of Marxian doctrines has accepted and labeled many of its individual doctrines as pieces of "social progress."

Consider, if you will, the social reformer's advantage in developing racial hatred and class consciousness. His advantage in debasing national currency, gaining control of the nation's gold and the neutralization of the courts.

Note how the parts of social revolution fall together. Think of where the national gold is today. Think about the current values of the dollar. Think of what has happened in this country since the power of our courts has been superseded by the authorities given to some two hundred alphabetic boards.

Reflect upon how the apostles of Marxianism have used such beautiful terms as "Security," "Social Progress," "Planned Economy," "Freedom from want and fear," and promises of "Insured Health," to charm and dull the senses of the American mind so it would fail to observe the subtle shift to a centralization of authority. And last but not least the crusade of those who consider it "as a Holy Duty" to fight for these measures.

Such power hungry individuals always preach sacrifice. They always denounce internal corruption and promise a paradise to those who will renounce everything known to be worthwhile and join their forces. They work on the theory that if they know how to rule a single man, they can gain all mankind.

Great men, men who think for themselves, not of themselves, have a keen sense of values, so they are of no use to power hungry schemers. Happy men are self sufficient and self sufficient men hinder the plans of the schemer. So greatness and happiness must be destroyed.

If the standards of achievement set up are open to all, but adapted to the most inept, those least capable, then the incentive to effort is killed in all men, great or small. For, to praise or enshrine mediocrity is to kill the incentive for improvement toward perfection.

If a man is made to feel incapable of achieving his goal, he develops a sense of inferiority. He will give up eventually all ideals and aspirations. When he cannot practice what he preaches, he develops a sense of guilt and a lack of reverence for things worthwhile.

If these schemers can make men feel that their wants are no longer a natural right, but a shameful admission of their needs, then they have prepared them to seek consolation, support and escape from their burdens. If these schemers can destroy a man's happiness, uproot his reverence for things worthwhile, cause him to be ashamed of his efforts to be self-reliant, then they have gained control of that man. Such a man is ready to believe that he has been abused and misled by capitalistic taskmasters and even unsympathetic physicians.

When men are denied the things they want they are unhappy. If the grass is made to look greener on the other side of the fence, they will be unhappy until they get across the line. When they learn it wasn't the grass that was so green they are unhappy again.

Glaring results of the bungling that has developed in the thousands and thousands of positions which power hungry schemers created and filled with untrained and unqualified personnel, is, in my opinion, the most vulnerable spot for our attack. Is there any reason why we should not capitalize on this situation and bend our efforts to counteract such bungling as affects our patients?

It would seem to be a most logical time to quell this revolutionary trend by an evolutionary movement of the medical profession, while people are looking and listening for some solution to their problems.

If one listens to the radio and reads the newspapers there can be little doubt about public unrest.

As mentioned before, the conflict is on. Willingly or unwillingly you are a part of it. The question now is, are you going to continue defensive tactics or are you going to take the offensive. It is generally conceded that defensiveness is prima facia evidence of guilt. The success of our military forces and even our football teams depends, not upon their defensive tactics, but on the power of their offense.

It may be well enough for Great Britain to boast the loss of every battle save the last one, but this is not Great Britain. The progress of medicine stopped

in that country because defensive tactics failed to halt the advance of socialization. Power hungry groups have created confusion and chaos wherever they have been allowed to exist.

On the assumption that knowledge is power, and that a properly informed public will see to it that the rights of a democracy are preserved, let us devote ourselves to an offensive task.

Private opinion is still at a premium, for private opinion molds public opinion and public opinion governs national behavior.

With national behavior as it is today, it is not enough for us to just be opposed to various social reforms. Individual citizens are unalterably opposed to them, too, as soon as they realize how their liberties will be affected. It is your job and my job to show our patients, the individual citizens, how government controlled medicine will affect them more than it does us. We, the private practitioners of medicine, look upon life and health as something sacred, rather than a pawn for votes and power, and are opposed to such social reforms as jeopardize our patients.

There could be no better time than now for the medical profession to take the offensive. There was a time when the medical profession was without prepayment plans for sickness benefits and showed little organized effort to meet public demands. That is not true today, thanks to the power hungry individual who instituted political schemes which spurred the medical profession to satisfy these needs.

We are in a position now to advance without apologies. Voluntary medically sponsored prepayment plans for hospital and sickness benefits are past the experimental stage. Rapidly swelling enrollments for such benefits is not only evidence of the need that existed for such plans, but proof of a desire on the part of the American public to retain a free choice of physicians and other virtues which go with a democracy.

Our task is to give facts concerning these plans to the man who not only wants sickness benefits, but who wants to maintain the same degree of freedom to choose his physician that he still has to choose his wife.

Economic problems are not confined to the medical profession. The entire business world has been and still is, flourishing in a sea of economic distress. The common man is rapidly being convinced of the inabilities of the economic engineer and social planner to solve these problems satisfactorily.

In contrast to our forefathers, who had a quaint idea that early to bed and early to rise, would make a man healthy, wealthy, and wise enough to support his government, these power hungry individuals conceived the idea that the government could and should support the people. They have tried to prove to everyone that he can go to bed late, get up when he pleases, and that Uncle Sam will take care of his health and everyday needs.

The medical profession needs to make itself more audible. During the past few years while forging ahead with plans for medical care, its success in delaying proposed legislation has given the power hungry schemers a real headache. As evidence of this, recall the various forms in which socialized medicine bills have been sent to Congress, how in the last session these schemers broke up the Wagner-Murray-Dingell bill and tried to get it through in pieces, the slick tactics they have used to get individually wrapped packages of the so-called social progress through the legislature.

Again as evidence of the contention that now is the opportune time for us to take the offensive, consider the dissatisfied mind of the American public and the muddled condition of public and private affairs as the result of bureaucrats and their regulatory directives.

The disgust of the American public for bureaucratic control increases daily in direct proportion to its realization that government assistance is tantamount government control. The common man is rapidly losing faith in the wisdom of the government control, because he knows so many untrained men who have gone to Washington and assumed the right to dictate and regulate his freedom.

The type of men who went to Washington and presumed to improve upon nature, first by regulating crop productions, then by killing off innocent little pigs without teaching their mothers anything about birth control have further disrupted American confidence by their unworkable legislative solutions concerning food, clothing, wages, housing and working conditions which are so important to the health of the nation.

The American public seemed quite content to pay the grocery bill out of one pocket and subsidies out of the other. But, since they have started paying all their bills out of the same pocket they have turned a critical eye on Washington.

The public has been rather rudely awakened to the fact that their liberties are being controlled by so-called experts in and out of Washington, men who made a failure of operating their own affairs and who now presume to know more about the problems of the men at home than they do themselves.

In addition to capitalizing on the mistakes of the power hungry schemers and their sucklings at the top, we have a most effective means of changing such subversive forms of control by getting our facts to the people who are being oppressed by these reforms.

Holding to the contention that a properly informed public will control this situation properly, it is my opinion that we should not be content with our efforts in the interests of the public until we know that our facts have been properly disseminated.

I cannot agree with those who claim that all social welfare workers are mere dupes of the power hungry schemers. In my opinion most social welfare workers are devoted to the best interests of the same people we have pledged ourselves to serve. Proper attention on our part to the problems they are trying to solve for the people they serve might result in gaining their assistance to help us counteract the subversive efforts of the Judases in our own profession.

We should collaborate also with our allied professions to gain this objective. Dozens of other professions and business groups are vitally interested in a solution of this problem.

If we, by exhibiting an interest in the solution of their problems should gain support of the dentists, the nurses, the veterinarians, the morticians, the ministers, the lawyers and the numerous business men's and business women's organizations, we would open up valuable avenues of influence which no politician could ignore.

At a time when potentially successful business men have expressed themselves as being ready to take their fishing pole to the river and let regulatory boards see if they can run the business, are we going to muff our opportunity to present the virtues of our voluntary prepayment plans for hospitalization and sickness benefits? Are we going to maintain a position of status quo or are we going to assume our obligations as honorable citizens and do our share to solve the problems of our community?

I mentioned two very personal reasons why I am interested in this problem, reasons why I should like to leave the field of medicine as good or better than I found it.

When my son was about four years old I saw his eyes gleaming in the light one night as he lay across the room from me. He was looking at pictures in the American Journal of Urology. I said, "Jim, what are you going to be when you grow up?" He answered, "Oh, I guess I'll be a doctor." In answer to the question why he wanted to be a doctor, he very promptly gave me four reasons. "So I can have patients, take rocks out of people, stay up late at night and make speeches."

His older sister surprised me last year when she was ready to enter college by saying, "Daddy, if I could really be what I want to be, I'd study to be a doctor." I can well remember when she was just a little tot. It didn't seem to worry her one bit if she or her playmates broke their dolls or toys. She consoled them all with her statement, "My daddy can fix it."

I really would like to justify that girl's confidence in her daddy's ability to fix things. I would like to fix things so the boy can have patients, that he may be the free choice of those patients. I hope, too, that he is qualified, by proper training in schools without government control to take out rocks. I hope that he can stay up late at night if he chooses and be free to talk as he pleases.

I think you can understand why I am interested in this problem. I believe there are others with like interests. All that is needed to quiet this tide of revolutionary reform, is for us to equip the individual citizen with true facts.

Information on State Institutions

Beginning in this issue is a series of articles on state institutions. These were prepared with the cooperation of the State Board of Social Welfare and the superintendents of the various institutions involved. The material is designed to bring to the medical profession of Kansas an adequate and concise statement of the facilities available in this state, the services that are rendered, and the manner in which patients may be committed.

The present plan is to group these institutions according to services rendered, and in this issue the mental hospitals are discussed. In following numbers children's institutions, the tuberculosis sanitorium, the University of Kansas hospitals and others will be discussed. Should there be any expression of interest in this material from the membership, the Editorial Board will then continue this series by including various other subjects that would be of interest to a physician practicing in this state. If desired, a summary of the licensure act will be prepared, in addition to articles on narcotic regulations, the alcohol tax law, Workmen's Compensation regulations, and private institutions or agencies such as schools for handicapped children, private sanitaria, and others. The Editorial Board welcomes suggestions about other subjects in this general field that doctors wish to have included in the series.

Much time and inconvenience will be spared both the physician and his patient in instances where these institutions are needed if the doctor understands the regulations and arrangements required before commitment is authorized. It is recommended, therefore, that unless the physician is quite familiar with these procedures, the issues of the Journal containing this series of articles be preserved for reference.

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88th Annual Session, May 12-15, 1947

With only three months remaining before the 1947 annual session of the Kansas Medical Society, May 12-15 at Topeka, members of the host group, the Shawnee County Medical Society, are holding regular committee meetings to arrange a program that will have educational and entertainment value to all doctors of the state. The first postwar session held at Wichita last spring drew a large attendance, but a number of Kansas doctors now in civilian practice were still serving in the armed forces at that time and could not be present. The 88th annual session to be held in May will bring together a great many doctors who have been unable to attend recent meetings.

SCIENTIFIC PROGRAM

All scientific sessions will be held in Topeka's beautiful municipal building. The program committee is now completing a list of outstanding guest speakers from all parts of the country, and the papers presented will be of interest to general practitioners and specialists alike. A full program for those interested in EENT subjects is also being arranged. Scientific movies on a variety of subjects will be shown throughout the meeting. A complete list of speakers will be announced in a later issue of the Journal, and the schedule of events will be published in the annual program issue printed in April.

ALUMNI BANQUETS

Alumni banquets at Topeka hotels will be a feature of the program for Tuesday evening, May 13. These gatherings have not been held in recent years, but so many expressions of interest were noted that the program committee felt that time for alumni meetings should be allowed. Response to this announcement has indicated that this will be one of the most popular features of the session. Each group will have its own informal program, details of which will be announced later.

SOCIAL EVENTS

The most important social event of the session, the annual banquet, will be held on Wednesday evening, May 14, at the cafeteria of the Topeka High School. A prominent speaker will give the address of the evening, culminating a full program. Other social events, round table luncheons and dinners will be arranged to insure varied entertainment.

TECHNICAL EXHIBITS

Technical exhibits have always occupied a place of importance during state meetings, and this year will be no exception. All booths will be located in an exhibit hall at the municipal building. A floor plan will be mailed soon to all commercial firms which have sponsored exhibits in the past and to a number of others showing an interest in the Kansas meeting. The exhibitors welcome this opportunity of displaying new products and appliances to members of the medical profession, and doctors are always interested in learning of recent advances and improvements in the products.

FOR THE SPORTSMAN

The entertainment of the sportsman will not be neglected during the meeting as the program for Monday, May 12, is being arranged with golfers and trap shooters in mind. Plans for the golf tournament have not yet been completed, but the committee in charge of the trap shoot announces that arrangements for marksmen have been made with the Topeka Gun Club, six and a half miles east of Topeka on Highway 40. Doctors wishing to take part in the trap shooting tournament are asked to bring their own guns. Targets and shells will be available on the grounds. During the evening a banquet will be held and trophies will be awarded the winners of the tournaments.

HOTEL RESERVATIONS

The large Topeka hotels have assured the committee that they will cooperate to the best of their ability in taking care of visitors attending the meeting, but crowded conditions still exist in Topeka. It is imperative that those planning to attend make their reservations early. These reservations may be made now, and a number of members of the Kansas Medical Society have already done so. Members who make reservations and then find that they will be unable to attend can cancel arrangements for their accommodations. If this should occur, a cancellation notice should be sent to the hotel immediately so that the rooms may be made available to some other doctor wishing to attend.

The larger hotels in Topeka are the Jayhawk, the Kansan and the Capitol. A list of smaller hotels will be sent on request.

WOMAN'S AUXILIARY

The Woman's Auxiliary to the Kansas Medical Society will hold its annual meeting on May 13, 14 and 15 at Topeka, and a series of programs and social events will make it an enjoyable occasion. Auxiliary news has been omitted from the Journal since the first issue of the Medical Auxiliary News was published last June, but an exception will be made in this instance and the complete Auxiliary program will appear in the April issue of the Journal, the same issue in which the Society program will be printed.

MEDICAL ASSISTANTS

A meeting for medical assistants will be held in Topeka on Sunday and Monday, May 11 and 12, at the Jayhawk Hotel. The program is not yet available, but several good speakers have agreed to take part and a number of social events are being planned. The program for the two days will appear in the April issue of the Journal.

SCIENTIFIC EXHIBITS

The Committee on Scientific Exhibits for the state meeting, to be held May 12 to 15 at Topeka, reports that arrangements for that section have been delayed because of the failure of Kansas physicians to arrange for exhibit space. To date only four doctors have advised the committee that they will have exhibits.

Since the exhibition of scientific material is an important feature of the state meeting, it is hoped that many more doctors will request space. Any interesting work or research can be displayed, and the state meeting provides an excellent opportunity for demonstration in exhibit form. The scientific exhibit section is always popular with those attending the meeting and the Topeka hosts for 1947 want to make this session outstanding in every respect.

Physicians interested in preparing scientific exhibits should contact the chairman of the committee, Dr. Henry S. Blake, 910 National Reserve Building, Topeka, Kansas.

Educating the public to "see your doctor"

This is No. 201 in the Parke-Davis series of messages published in the interest of the medical profession. Appearing in color in LIFE and other leading magazines, it will reach an audience of over 23 million people.

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No. 201 in a series of messages from Parke, Davis & Co. on the importance of prompt and proper medical care.



SUPPOSE you have a sore throat.

A friend may tell you how a bad sore throat was cured with a few sulfa tablets—may even offer you some and suggest that you try them.

To do so would be extremely unwise.

For your friend may have had a type of infection against which sulfa is often miraculously effective. *Your* sore throat may be of a kind on which sulfa has no effect whatever.

In any case, taking sulfa drugs without the guidance of a physician is a far more hazardous procedure than most people realize.

If you take sulfa for a minor ailment, for instance, you may become sensitive to the drug itself. Then if you should later have a serious illness, your doctor might find it unwise to prescribe sulfa for your case.

When you dose yourself with sulfa, you may also run the risk of kidney ailments, anemia, and other blood diseases. This is why in many states the law specifies that sulfa drugs may be dispensed only on a physician's prescription.

Your doctor is the only person competent to judge whether your ailment is one which responds to treatment with sulfa, and whether your ailment is serious enough to warrant the use of sulfa. He alone knows which of the various sulfa drugs to use, how much to give, what precautions to take.

SEE YOUR DOCTOR. What is true of treating illnesses with sulfa is true of any form of treatment. Don't take a friend's suggestion. Don't prescribe for yourself. At the first sign of illness see your doctor. He is the one person qualified to advise you on the vital questions which concern your health.

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STATE INSTITUTIONS

Kansas Hospitals for the Insane

Editor's Note: This is the first in a series of articles prepared by the Editorial Board of the Journal to acquaint the physicians of Kansas with institutions and facilities operated by the state which might be of service to the medical profession. The Journal is indebted to the Kansas State Board of Social Welfare and to the superintendents of the various institutions for supplying information presented in this and in following issues.

Kansas, through the Department of Social Welfare, operates three hospitals for the insane. They are located at Larned, Osawatomie and Topeka. Superintendents of the institutions, in the order named, are Dr. J. T. Naramore, Dr. S. D. E. Woods and Dr. M. L. Perry. The three mental institutions are similar in nature, and regulations governing one are applicable to all. In general, patients are committed to the nearest institution unless a more distant hospital has the earliest vacancy.

These hospitals admit patients who are considered to be insane. Not eligible for commitment are patients who are feeble minded or idiotic from birth or those whose mental development was arrested prior to the age of puberty. Epileptics, alcoholics and drug addicts are not eligible unless the manifestations thereof are such as to endanger health. person or property.

Admissions to state hospitals are effected in two ways. The first is through voluntary commitment. In this instance the patient enters the hospital of his own free will and is presumed to be in sufficient touch with reality to understand the nature of his request. Voluntary commitments are generally not encouraged by the superintendents because the patient may leave the institution virtually at any time he wishes. According to law, a superintendent can hold a voluntary patient no longer than ten days after receiving written notice of the patient's intention to leave. Application for voluntary commitment must be made through the Probate Court of the county in which the patient resides.

The most common procedure involves an adjudication of insanity. Any reputable adult citizen may petition the Probate Court of the county in which the patient resides or is present for the patient's commitment. The petition, commonly referred to as the complaint, shall state the name and address of the patient and of his nearest relatives, with reasons for the application and the names of two witnesses by whom the truth of the petition may be proved. Signing a petition is not without hazard because if it is shown that this was accomplished through malice, or for a corrupt consideration or advantage, the petitioner shall be guilty of a misdemeanor subject to a maximum fine of $1,000 or a year in jail. Petitions should not be filed against strictly senile persons with the obvious intent of relieving a family or community of a disagreeable responsibility.

The Probate Court will arrange for a hearing. If deemed advisable, the Probate Judge may order a preliminary examination by a duly licensed doctor of medicine or by the staff of the psychiatric receiving ward of the School of Medicine of the University of Kansas, or by a member of the staff of one of the state hospitals. If this is done, the patient cannot be held at any place for observation longer than for 30 days.

There is a choice of two alternatives regarding a hearing. The hearing is conducted by a commission composed of two duly licensed physicians, unless demand for a jury trial is made by an interested party or in behalf of the patient. Legal counsel must be provided for the patient if he is unable to provide his own. The patient also must be present unless it would be manifestly improper. After an examination, this commission reports its findings to the Probate Judge and recommends a course of action.

The other type of hearing is a trial by jury, which is composed of six members, of which one shall be a doctor of medicine. Again the patient must be present, and counsel must be provided.

At the time of the hearing, whether by jury or by commission, the Probate Judge shall determine the patient's residence and inquire into the pecuniary condition of the patient and those bound by law to support him. Children are required to support parents, and parents children. A spouse is also obligated for support. Payment is due quarterly at the rate of $5.00 a week. Should the patient and all persons legally bound for his support be unable to pay, the patient then is classified as a county patient and the Probate Judge enters that finding in the report.

The court's order of insanity, together with an application for commitment to a mental hospital, is sent to the Department of Social Welfare in Topeka. The Department determines whether or not the patient shall be admitted and informs the Probate Judge of the institution to which the patient shall be sent and the time he may be delivered. The Probate Judge arranges for some suitable person to conduct the patient to the hospital. Women patients must be accompanied by female attendants at all times.

If the patient is considered to be unsafe, he may be confined in a private institution, in a local hospital or other facility pending completion of details necessary prior to commitment.

Discharge from a state hospital is under the heading of not insane, restored, improved, unimproved or by death. A patient discharged as restored regains his legal competence by order of the Probate Court. The decision with regard to discharge rests with the superintendent of the institution, except that the matter of the patient's competence may be reopened in the Probate Court. Petitions to redetermine competence may be filed no oftener than once each six months and not within six months after the patient's admission. Should the commission or jury act to declare the patient competent, the Probate Court's order of restoration must be complied with and the patient discharged.

As it is manifestly unwise to discharge patients without first determining their ability to readjust themselves, the most frequent method of release is by parole. The patient is released by the superintendent and remains on parole under Probate Court control. Under this plan arrangements for care are made in advance in the community to which the patient goes. A patient on parole does not regain his competence in the eyes of the law and, if return to the institution becomes necessary, it may be accomplished without a hearing or recommitment at the discretion of either the Probate Judge or the superintendent. In the case of a patient who has been restored, the situation is different. If hospitalization is again necessary, the complete commitment procedure must be repeated.

Board to Meet in March

The Kansas State Board of Medical Registration and Examination announces that its next meeting will be held, on Tuesday and Wednesday, March 25 and 26, at the City-County Health Center, 619 Ann Avenue, Kansas City, Kansas. Examinations will be given at that time.



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KANSAS PHYSICIANS' SERVICE

December 31 marked the conclusion of the first year of operation of Kansas Physicians' Service. The annual report was a surprising record of achievement in which the Kansas Medical Society takes pride. The Society now anticipates an ever increasing volume of business for this voluntary, non-profit, prepaid medical care plan. In the course of the first year almost 15,000 individuals were enrolled in membership. Because of early delays in reorganizing the business office, the majority of those participants came into the plan duting the later months of the year.

Kansas has enjoyed an almost singular experience in the organization of medical care plans in that most practicing physicians have agreed to participate. Nine hundred forty participating physician's agreements ate on file in the Society office. Approximately 600 individual claims were paid to 231 physicians during the first year of operation. A further element of satisfaction came from the fact that the financial condition of the corporation is excellent. The entire debt to the Kansas Medical Society has been liquidated and Kansas Physicians' Service is solvent.

Actuarial experience has been good enough during the first year to prompt the Board of Directors to increase benefits in several respects. Of primary importance to physicians is the provision that minor accidents, those involving sprains, strains and burns, will be paid up to $25, beginning March 1. Major accidents will be covered as before. The Board of Directors will continue to increase benefits regulatly as long as actuarial experience petmits.

Kansas Physicians' Service has obtained the patt-time services of Col. Seth A. Hammel of Topeka as medical claims supervisor. In the future Dr. Hammel will review all claims, thereby greatly facilitating this procedure. Kansas Physicians' Service is fortunate to have the benefit of Dr. Hammel's long experience with work of this nature and will now dispose of all claims promptly.

Although the Kansas Medical Society entered into this venture somewhat timidly a year ago, experience has shown that the corporation was founded on sound plans and that in the future this will become one of the major activities of the Society.

Cancer Clinics During March

A series of clinics on cancer, to be presented at five cities throughout the state during the month of Match, has been arranged by the Committee on Control of Cancer of the Kansas Medical Society, the Kansas State Board of Health, and the University of Kansas School of Medicine. Enrollment for each class is limited to 70, and doctors may register by sending the fee of $5.00 to the University Extension Division, University of Kansas, Lawrence.

Two prominent specialists, Dr. Eldridge H. Campbell and Dr. George G. Finney, will present the course. Dr. Campbell, professor of surgery at Albany Medical College, Albany, New York, served as chief surgeon of the 33rd General Hospital during the war and was consultant in neurosurgery in the Mediterranean theater. Dr. Finney is assistant professor of surgery at Johns Hopkins University and a member of the surgical staff at Johns Hopkins Hospital. During the war he was director and chief surgeon of the 18th General Hospital and surgical consultant of the 10th Army.

The plan provides for three sessions at each of the five cities, an evening meeting on the first day with morning and afternoon classes on the second day. The topics to be covered are as follows:

7:30 P.M., FIRST DAY

Tumors of the Brain—Dr. Campbell

Cancer of the Breast—Dr. Finney

9:00 A.M., SECOND DAY

Tumors of the Spinal Cord—Dr. Campbell

Cancer of the Colon and Rectum—Dr. Finney

1:15 P.M., SECOND DAY

Cancer of the Stomach—Dr. Campbell

Cancer of the Mouth—Dr. Finney

The following dates have been selected for the five cities:

March 8-9—Topeka, Shawnee County Medical Society Offices, Victory Life Building

March 10-11—Salina, Monday evening, Hotel Lamer; Tuesday, Memorial Hall.

March 11-12—Hays, St. Anthony's Hospital.

March 13-14—Wichita, Hotel Allis.

March 15-16—Parsons, Saturday evening, Quality Cafe; Sunday, Junior College.

Plans for Special Train

Plans for a special train to Atlantic City for the centennial celebration of the American Medical Association, June 9 to 13, are now being completed by Rainbow Travel Service, Inc., Oklahoma City. This tour, sponsored jointly by the Kansas Medical Society and the Oklahoma State Medical Association, is the only tour being arranged by either gtoup.

Under this plan, all atrangements will be made by the Rainbow company for transportation, hotel reservations, sight-seeing trips, etc. Any member of either of the state societies is eligible to take the tour and to include members of his family.

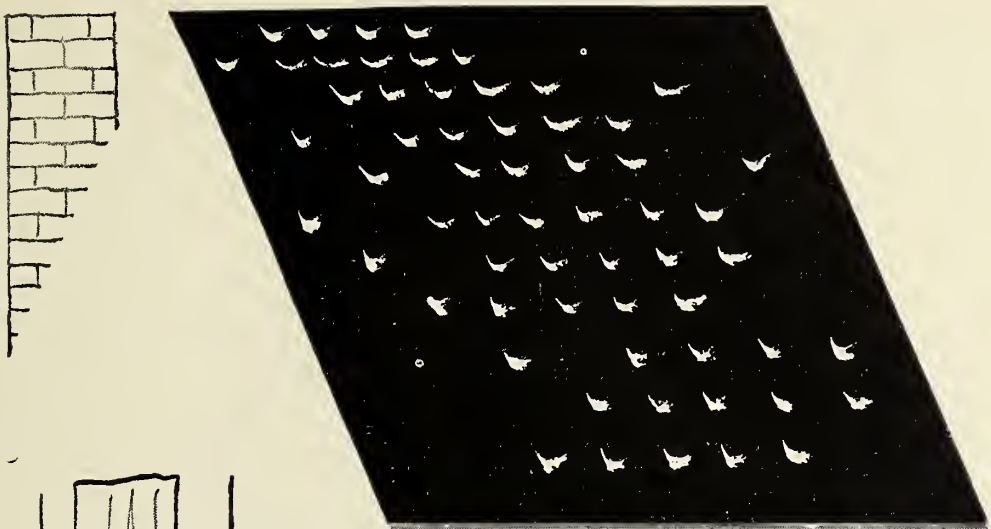
Two plans are available. One tour will begin on June 4 and end on June 18, and the other will continue for another week and add many points of interest to the itineraty.

The Oklahoma and Kansas groups will meet in St. Louis on June 4 and will stop first in Washington, D. C., for a two-day visit. Reservations there will be at the Statler Hotel, and trips will be available to Mount Vernon, the F.B.I. laboratory, the Smithsonian Institute and the Mellon att gallery. Then the tout will proceed to Philadelphia to visit historical sites in that locality before going on to Atlantic City.

At the close of the A.M.A. meeting on June 13, the group will go to New York to spend three days at the Roosevelt Hotel. There will be conducted tours to different parts of the city, and arrangements are being made to secure tickets for an outstanding New York play. Those who take the two-weeks tour will leave on June 16 to return to Kansas, and the other group will go on to Albany and Boston. A special program is being arranged by the Boston Medical Association to show the visitors points of interest in that vicinity. Then the party will go on to the Chateau Frontenac at Quebec for another two-day stop-over, and before leaving Canada will stop at the famous Mount Royal Hotel in Montreal.

After an overnight trip to Niagata Falls and a stop in Buffalo, they will board a Lake Liner for a 240-mile cruise to Dettoit, with time allowed for sight-seeing there before returning to Kansas and Oklahoma.

Complete details of the tours may be secured from Rainbow Travel Service, Inc., 823 First National Bank Building, Oklahoma City 2, Oklahoma.







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Miss Muffet's traditional meal should be supplemented with vitamin D, for it has been clearly demonstrated that children require vitamin D not only during their first two years but for as long as growth persists.[1] Upjohn makes available convenient, palatable, high potency vitamin D preparations derived from natural sources in forms to meet the varied requirements from earliest infancy through adolescence.

1. Am. J. Dis. Child. 66:1 (July) 1943

UPJOHN VITAMINS

VETERANS ADMINISTRATION AGREEMENT

Recent conferences between representatives of the Veterans Administration area and regional offices and the Kansas Medical Society have resulted in a revision of the original agreement with the Veterans Administration. These changes should operate to unify the program and will now bring about a standard procedure for all patients cared for under the terms of this agreement.

In the future examinations will be issued from the regional office in Kansas City, the regional office in Wichita, or from the Medical Service Center in Topeka. Examinations will be sent only to doctors who have been approved by the Kansas Medical Society and only in the categories to which individual examiners have been assigned. Examinations must be completed within ten days. If, for any reason, this can not be accomplished, the Topeka office should be notified and further instructions will be given. All completed examinations shall be returned to Dr. E. H. Gibbons, Medical Coordinator, Veterans Administration, Medical Service Center, 215 West Tenth, Topeka, Kansas. This represents the only change in the program regarding examinations. It will be recalled that previous instructions requested doctors to return the examination to the office from which it was issued, but in the future all examinations shall be returned to the office in Topeka.

No change occurred regarding a patient's eligibility for treatment. The veteran will select any approved physician and may be treated for service-connected disabilities, except that female veterans are eligible for hospital care for any condition except pregnancy and any veteran under Public Law 16 may be treated for any condition that interrupts his schooling.

Unless the attending physician requests authorization in advance or at least within several days after treatment is begun, the Veterans Administration will not assume responsibility for payment. It is essential that all members cooperating under this program obtain authorization. Authorization should be obtained through the Medical Service Center at Topeka. Requests may be made in writing or, in case of emergency, by telephone 2-9319. Sufficient information shall accompany the request to give the Medical Coordinator identifying data concerning the veteran and a synopsis of contemplated treatment.

Emergencies arising after five o'clock or on days when the office in Topeka is not open may be cared for by contacting the medical director of the nearest regional office. The regional offices in Kansas City and Wichita will issue authorization for treatment, but for the purpose of unifying the Kansas program it is recommended that doctors customarily obtain authorization through the Topeka office.

Advocates Voluntary Retirement Plans

Advocating abandonment of compulsory retirement on a calendar age basis, Dr. Theodore G. Klumpp, president of the Winthrop Chemical Company, proposed extension of volunary retirement plans with realistic benefits in an address before the American Public Health Association at its annual meeting in Cleveland last month.

Noting that adult population is steadily increasing in proportion to total population, Dr. Klumpp predicted that by 1980 there will be not less than 60,000,000 Americans 45 years of age and over and more than 21,000,000 who are 65 and over. He recognized social problems that will arise from the increase in adult population, and proposed a seven-point program as a solution. His suggestions are:

1. Abandonment of compulsory retirement, taking into consideration the fact the physiological age is not synonymous with chronological age.
2. Provision for selective retirement based on unfitness since hiring is selective and based on fitness to do a given job.
3. Formation of a retirement board composed of medical and psychiatric members as well as administrative officials.
4. An offer of downgrading in position and salary to older workers who are tapering off in industry, just as young apprentices gradually work up in skill, performance and remuneration.
5. Greater efforts on the part of industry, government and private business to employ partially disabled persons.
6. Plans for home environment for the aged and disabled in preference to institutional care.
7. Improvement of necessary institutions to give physical, mental and spiritual comfort.

Civilian Medical Consultants Appointed

One hundred twenty-two experts in the nation's medical profession and allied specialties were appointed civilian consultants to the Secretary of War through the Surgeon General, the War Department announced recently. This brings the total of civilian consultants available to the Army Medical Department to 327. Most of those named are former Army officers who are recognized as authorities in their fields.

Meeting of Medical Consultants

The first formal meeting of the Society of United States Medical Consultants of World War II was held at the Army Medical Center, October 18. The society is composed of the doctors, formerly medical officers now returned to civilian life, who were consultants for the Army Medical Department during the war, and the aim of the meeting was the establishment of a mode of procedure. Specific services consultations were held on the following day with Dr. William C. Menninger, Topeka, directing the neuropsychiatric group.

Rating Specialist Needed

A medical doctor is needed immediately by the regional Veterans Administration office to serve as a rating specialist on a board which rates claims of disabled veterans, Manager R. R. Gibson has announced. Applicants should have at least 15 years practical experience and be under 62 years of age. Annual salary, based on a 40-hour work week, is $5,905.

Complete information may be obtained from the regional VA personnel director, 3801 South Oliver, Wichita.

V. A. Construction Authorized

A broad construction program designed to provide an additional 10,650 beds for Veterans Administration hospital patients was recently approved by President Truman and the Federal Board of Hospitalization, according to an announcement made recently by the Wichita office of the V. A. Included in the authorization is a 1,000 bed neuropsychiatric hospital at Topeka to replace the present Winter hospital, acquired from the Army for temporary use pending completion of permanent construction. Funds will be requested in fiscal 1948 appropriations for a site only, officials said.



Furunculosis . . . second in the series: "FACIAL EXPRESSIONS OF SICKNESS"

From a practical standpoint, the use of penicillin orally should be limited to the infections in which low doses of parenteral penicillin have proved adequate; to prophylaxis; and to the convalescent stages of such acute infections as furunculosis. Here, when the crisis is past and the fever receded, the use of two tablets (100,000 units) every hour or six tablets (500,000 units) at three hour intervals, day and night, for 48 hours is a tested safeguard against relapse. For such prophylaxis, tablets of calcium penicillin, 50,000 units each, are available in bottles of 12.

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COUNTY SOCIETIES

Dr. Thomas P. Butcher was speaker at the December meeting of the Lyon County Medical Society and presented a paper on "Intestinal Resections."

* * *

New officers for the Sedgwick County Medical Society were installed at a meeting held at Wichita January 7. The following are now serving: president, Dr. J. V. Van Cleve; vice president, Dr. Wayne C. Bartlett; secretary, Dr. Clyde W. Miller; treasurer, Dr. J. B. Fisher. After the installation service Dr. E. H. Gibbons and Oliver E. Ebel, both of Topeka, explained medical service to veterans under the Kansas Medical Society's agreement with the Veterans Administration.

* * *

The January meeting of the Marion County Society was held January 8 at the Green Parrot, Marion. The program for the meeting was a discussion of poliomyelitis.

* * *

At the January meeting of the Shawnee County Society Dr. Leon L. Bernstein, Winter hospital, spoke on herniated intervertebral discs. Dr. Robert M. Heilman was elected to membership in the Society and Dr. H. B. Hogeboom was named an honorary member.

* * *

Members of the Marshall County Society entertained the Auxiliary at a dinner meeting at Marysville January 15. At the business session Dr. W. J. Stewart was named president; Dr. O. P. Wood, vice president; Dr. H. H. Haerle, secretary-treasurer.

* * *

A meeting of the Labette County Society was held January 22 at the county health center. Dr. Paul V. Joliet, divisional director of tuberculosis control of the Kansas State Board of Health, and Mr. Andre Baude of the Norton sanatorium discussed the work of their organizations.

* * *

Members of the Cherokee County Society met January 21 at the office of Dr. Frank James at Galena. Two members of Alcoholics Anonymous were present as guests and discussed the work of their organization.

* * *

The January meeting of the Wilson County Society was held on the 22nd at Neodesha, a dinner meeting at which members of the Auxiliary were guests. Mr. Oliver E. Ebel, Topeka, discussed the agreement between the Veterans Administration and the Kansas Medical Society and Miss Lorene Edwards, Topeka, and Mr. Floyd M. Edwards, Wichita, spoke on Kansas Physicians' Service.

MEMBERS

Dr. Don C. Wakeman, Topeka, has completed the requirements for fellowship in the American College of Physicians and will be formally initiated at a meeting to be held in Chicago in April.

* * *

Dr. John Aldis, who formerly practiced in Council Grove, has accepted a position on the staff of the state hospital at Osawatomie.

* * *

Dr. Harold Hyndman, Wichita, has been named medical director of the Sedgwick County Blood Donor service, a center which will supply whole blood and plasma to all A.M.A. accredited Wichita hospitals and the Veterans Administration.

* * *

Mrs. Rex Fortenberry, daughter of Dr. and Mrs. J. R. Newman of Fort Scott, has recently completed a lecture tour sponsored by the Woman's Auxiliary to the Louisiana State Medical Association. Mrs. Fortenberry, an attorney, spoke on "Medicine at the Crossroads," emphasizing arguments against socialized medicine.

* * *

Dr. John Conroy, who practices in Atwood, is opening an office in McDonald for practice there each Wednesday afternoon.

* * *

The American College of Surgeons has announced the names of four Kansans who were received into fellowship at the convocation held in December, Dr. Frederick W. Matassarin, Wichita; Dr. Glenn R. Peters, Kansas City; Dr. Charles M. Starr, Wichita, and Dr. John W. Cavanaugh, Topeka. Among those taken in as fellows during the war years are Dr. Clyde B. Trees, Dr. James Bowen and Dr. Robert Pfuetze, all of Topeka.

* * *

Dr. Philip W. Morgan, Emporia, has announced that Dr. Edward J. Ryan, who was graduated from the University of Kansas in 1936, is now associated with him in practice. Since 1941 Dr. Ryan has been on the staff of the Cleveland Clinic in the section of Endocrinology and Metabolism, and he will continue that type of work in Emporia.

* * *

Dr. B. E. Miller and Dr. C. C. Kerr, Council Grove, announce that Dr. William B. McCunniff, formerly of Colorado, is now associated with them in practice.

* * *

Dr. Laurence A. Clark, who was released from the Army last fall and has been practicing in Larned since that time, has decided to continue practice there in association with Dr. J. A. Blount.

* * *

Dr. Howard E. Snyder, Winfield, is the author of a paper, "Replacement of Blood," printed in the January 25 issue of the Journal of the American Medical Association.

* * *

Announcement was made this month that Dr. W. H. Walker is taking over the practice of his father, Dr. C. W. Walker, in Eskridge. The elder Dr. Walker retired recently and moved to Topeka.

"Clinic" for Physicians and Assistants

The first of a series of "clinics" for physicians and their assistants, designed to bring about a better understanding of their mutual problems, was held at Emporia on Sunday, January 19. The meeting was sponsored by the Kansas Medical Assistants' Society with members of the Lyon county group as hostesses. Approximately 60 physicians and assistants attended.

During the morning program Dr. Clyde O. Merideth, Jr., chairman of the Kansas Medical Society Committee on Medical Assistants, discussed personality development, stressing the qualities that affect the doctor, the patient, and the assistant. An informal discussion followed. At the luncheon session Dr. David L. MacFarlane, president of Kansas State Teachers' College, Emporia, spoke on "The If's of History," after which the group was entertained at a tea at the home of Dr. and Mrs. Merideth.

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Mr. Doctor, you can minimize the chance of varying vitamin D potency when you suggest Page Evaporated Milk. Its sunshine vitamin is derived from biologically assayed irradiated 7-dehydrocholesterol. This accurate measurement assures you of uniform vitamin D potency in every can of milk.

Irradiated 7-dehydrocholesterol gives you a source of this precious vitamin that has been tested and proved by modern science—a source which can be accurately controlled and measured.

Next time you see the green and black Page label note that it specifies 400 USP units of vitamin D added per pint of evaporated milk. And remember: You can depend on this added vitamin D potency being the same in the can as stated on the label.



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THE KANSAS PRESS LOOKS AT MEDICINE

Fighting Socialized Medicine

The National Physicians Committee, which is probably a committee of the American Medical Association, one of the most powerful professional, trade or craft organizations in the United States is now bombarding the newspapers with propaganda against socialized medicine, with which the country is threatened.

Outside of a few socialistic and communistic minded people, we doubt if there are many people of the country who would favor socialized medicine, but nevertheless there is a movement in the country which is working toward that end. And when medicine is socialized, it will take only a short step to socialize many other things. Such a system does not work well with our American idea of free enterprise. Americans have not yet reached the place where they want to be regimented.

But when we say we are against socialized medicine, we have the public much more in mind than we have the physicians as an organization. To a large extent the physicians have brought the clamor for socialized medicine on themselves. They have been drifting away from the family physician idea, and into specializing. They have drifted away from taking care of the patients in their homes to the hospital system. In other words they have made it so expensive for people to be sick that they will grasp at almost any kind of a straw for relief. No doubt socialized medicine would be more expensive than the present system, but it would look cheaper, and would be cheaper at the time of sickness.

Of course we need specialists and we need hospitals, but we also need the family physician to take care of our ordinary ills and the trend of organized medicine is away from the family physician especially in the small towns. We need well educated physicians, but the educational requirements have been clamped on to eliminate competition, which in turn has made the services of a physician so high that the people may turn to socialized medicine, even though it is a bad thing.—*McCune Herald.*

* * *

Portrait of a Doctor

The initials, M. D., after the name of your family doctor, mean much that is important to the health and happiness of the individual, the family, and the community. Your family physician is more than just a person highly trained and skilled in the medical profession. This skill, plus human kindness and understanding, the will to ease pain and prevent death, forgetfulness of self in service to humanity—all of these qualities make the family physician one of the most valuable and best loved persons in the community.

Your doctor is, first of all, a healer of the sick. Upon beginning the practice of medicine he takes an oath to consider paramount the health and well-being of his patients. Rain or shine, night or day, many are the true stories of the calls he makes to help save the life of a child with pneumonia, deliver a baby, or ease the suffering of an elderly person.

Not only is the physician a healer of the physically sick but also a healer of the mentally ill. Unpublicized but unforgotten are the talks in the privacy of the physician's office in which he helps reassemble the misguided thoughts of a patient with financial troubles or one with marital difficulties. Your physician is aware that many of his patients who complain to him of physical aches and pains actually are suffering from underlying mental stress.

No home is too poor for the doctor to hang up his hat, roll up his sleeves and accomplish his mission of mercy. The physician plays the part of public servant in the community.

The family doctor is a neighborhood friend, never too busy to listen to a tale of the new trick the dog can play or the news of the arrival of a new calf. The physician is a possessor of a wealth of homespun philosophy.

As a clergyman once said, "The healer of the sick is a true servant of the Lord."—*Herington Times Sun, January 16, 1947.*

* * *

Socialized Medicine

Plans are being considered in Kingman county for the organization of health insurance groups, particularly the one known as the Blue Cross, which is strictly a co-operative plan. Along this line, an extensive study of prepayment medical device plans was recently made by Prof. Herbert D. Simpson, formerly professor of public finance at Northwestern university, which should be of interest at this time.

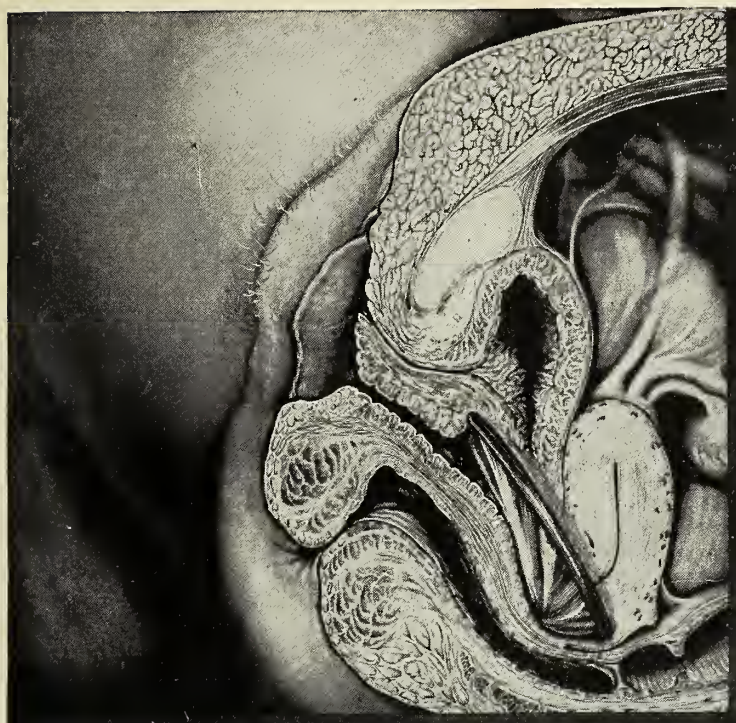
In an introductory chapter on the background of the movement, he traced the development in these words: "It is a movement that has been in process of gestation for some forty years. It had its origin in the logging camps and early industrial communities of the Pacific Northwest. Here the dearth of medical and hospital service through the conventional channels compelled the people to fall back on their own ingenuity with the usual result. They found means for securing what was necessary.

"From these small beginnings in the early years of the present century the movement has grown until in 1945 the Social Security board discovered 229 medical service plans in various parts of the country, exclusive of the Blue Cross and purely hospital association plans.

"Far-sighted leaders have sensed the changing conditions, changing needs, and the enlarged potentialities of medical science and medical service. Committees have been appointed in probably every medical society in the United States. Representatives have been sent abroad to study the medical systems of other countries. It is in this sense that the large number of medical plans recently organized represent not something new but only the logical outcroppings of a movement that has been going on for four decades."

It will be seen from the above report that those who try to regulate our lives from the cradle to the grave by some sort of a government plan, are away behind. All they are doing is to try to have the government take over what individual initiative started long ago. Here is the answer to the charge that we have failed to meet our obligations in the field of public health. Here is a refutation of the grandiose schemes for socializing medicine and turning the doctors into bureaucrats. Voluntary medical prepayment plans are making rapid progress now, and they are effectively meeting the needs and desires of the American pepole without compulsory taxes and political raids on the public treasury and payrolls.

The fact that Senator Robert Wagner is sponsoring the plan to have the government take over all medical practice should make the people suspicious of it. He is the same Senator Wagner who saddled the labor act onto this country which has brought us almost to the brink of disaster and made possible the wave of strikes which has swept



Most DEPENDABLE Method

The combined use of an occlusive diaphragm and vaginal jelly remains, in the published opinions of competent clinicians, the most dependable method of conception control.

Dickinson[1] has long held that the use of jellies alone cannot be relied upon for complete protection. It is noteworthy that in the series of patients studied by Eastman and Scott[2], an occlusive diaphragm was employed in conjunction with a spermicidal jelly for effective results. Warner[3], in a carefully controlled study of 500 patients, emphasized the value of a diaphragm.

In view of the preponderant clinical evidence in its favor, we suggest that physicians will afford their patients a high degree of protection by prescribing the diaphragm and jelly technique.

You assure quality when you specify a product bearing the "RAMSES"* trademark.

1. Dickinson, R. L.: Techniques of Conception Control. Baltimore, Williams and Wilkins Co., 1942.
2. Eastman, N. J., and Scott, A. B.: Human Fertility 9:33 (June) 1944.
3. Warner, M. P.: J. A. M. A. 115:279 (July 27) 1940.

gynecological division

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over the country the past year. It would seem that one of Senator Wagner's plans is about all the country can stand. —*F. J. Cloud, the Kingman Journal, Dec. 27, 1946.*

Request for Medical Books

A request for medical books has reached the Executive Office from Lt. Col. Warner F. Bowers, MC, who formerly was stationed at Winter Hospital, Topeka, and now is surgical consultant for the Pacific Theater. He reports that the Tokyo Imperial University hospital is setting up clinical records in English but is hampered by lack of textbooks in our language.

Thinking that many Kansas physicians discard textbooks when they purchase newer editions, Col. Bowers asked that they send volumes for which they no longer have use to Japan. Packages up to 11 pounds in weight may be mailed to Dr. Kikuo Ohtsuki, Tokyo Imperial University Medical College, Tokyo, Japan.

Pamphlet on Sickness Insurance

"Check and Double Check on Sickness Insurance" is the title of a pamphlet published in December by the Public Relations Bureau of the Medical Society of the State of New York. The subject is covered in 133 questions and answers with a complete index, arranged for the convenience of any speaker or writer who needs material for a 15-minute talk or an editorial a column in length.

The pamphlets may be obtained from the Public Relations Bureau of the Society, 292 Madison Avenue, New York 17, New York. The price is 25 cents per copy, with a reduction for quantity orders.

Change in U.S.P. XIII

A change in the title and strength of iodine tincture will be made in the new U.S.P. XIII, which becomes official on April 1, 1947, according to a recent announcement by E. Fullerton Cook, chairman of the U.S.P. Committee on Revision. Only one iodine tincture, the two per cent, will be recognized, and the seven per cent solution has been deleted. What was formerly called mild tincture of iodine will now be known as iodine tincture.

Syphilis Costs Increase

Problems arising from syphilis among veterans of World War II may cost a billion dollars, in the opinion of Dr. Donald M. Pillsbury, section chief in dermatology and syphilology of the Veterans Administration, in a statement made public by the American Social Hygiene Association last month. Care of syphilitic veterans of World War I cost taxpayers 82 million dollars up to June 30, 1940. Future costs are chiefly dependent on the extent to which veterans are encouraged to act in their own protection and on what citizens and communities do to insure follow-up and treatment to prevent the late and disabling and killing manifestations of syphilis.

Army figures show that more than 400,000 entered the service with syphilis or developed it while in the service up to January 1, 1947, and since then rates have been rising. Navy figures are in preparation.

All infected servicemen are given serological tests on discharge, and acute cases are sent to army hospitals or rapid treatment centers. However, public pressure for demobilization did not allow the services to keep and treat all the men shown to be infected. Official plans to insure follow-up and treatment often fail because of serious obstacles, red tape, lost records, variation in clinic facilities, and the like.

Dr. Pillsbury's statement of costs, greatly increased since September 27, 1944, when disability due to venereal disease became compensable, estimated an average cost of $40,000 per patient for paresis victims, or a total of $51,200,000 for care of 1,280 cases in VA hospitals in 1945, exclusive of World War II veterans.

Six Antimalarials Reviewed

Clinical experience with six drugs now available for attacking malaria was reviewed by Dr. Justus B. Rice, vice president in charge of medical research of the Winthrop Chemical Company, Inc., in a scientific paper presented before the recent convention of the Insular Medical Society in Puerto Rico. The six drugs listed are aralen, atabrine, quinine, paludrine, pentaquine and plasmochin.

Aralen was described by Dr. Rice as the drug of choice since it definitely cures falciparum malaria, often fatal form of the disease. All of the first four successfully attack the erythrocytic cycle of the disease, responsible for the distressing symptoms of all forms of malaria, and plasmochin attacks the cycle of the disease, limiting its spread by preventing mosquitoes from becoming infected.

Pentaquine is still undergoing research, Dr. Rice said, since it has been found too dangerous for general use since its present form is toxic to human red blood cells.

DEATH NOTICES

HENRY GALEN SNYDER, M.D.

Dr. Henry Galen Snyder, 66, a member of the Nemaha County Medical Society, died December 21, 1946. He was graduated from Rush Medical College, Chicago, in 1903, and immediately began practice with his father, the late Dr. Alvin Snyder, in Seneca, specializing in ophthalmology. He continued to practice there until his death, except during World War I when he served overseas with the Army.

* * *

ARTHUR ROYAL DILDINE, M.D.

Dr. Arthur R. Dildine, 69, who had practiced medicine in Kansas for 40 years, died in Wichita December 26, 1946. After his graduation from the University of Kansas School of Medicine in 1906, Dr. Dildine opened an office in Portland and practiced there for six years. He then moved to Cheney and continued to practice there until his death. He was a member of the Sedgwick County Medical Society. Dr. Dildine was also a graduate of the Kansas City Dental College.

* * *

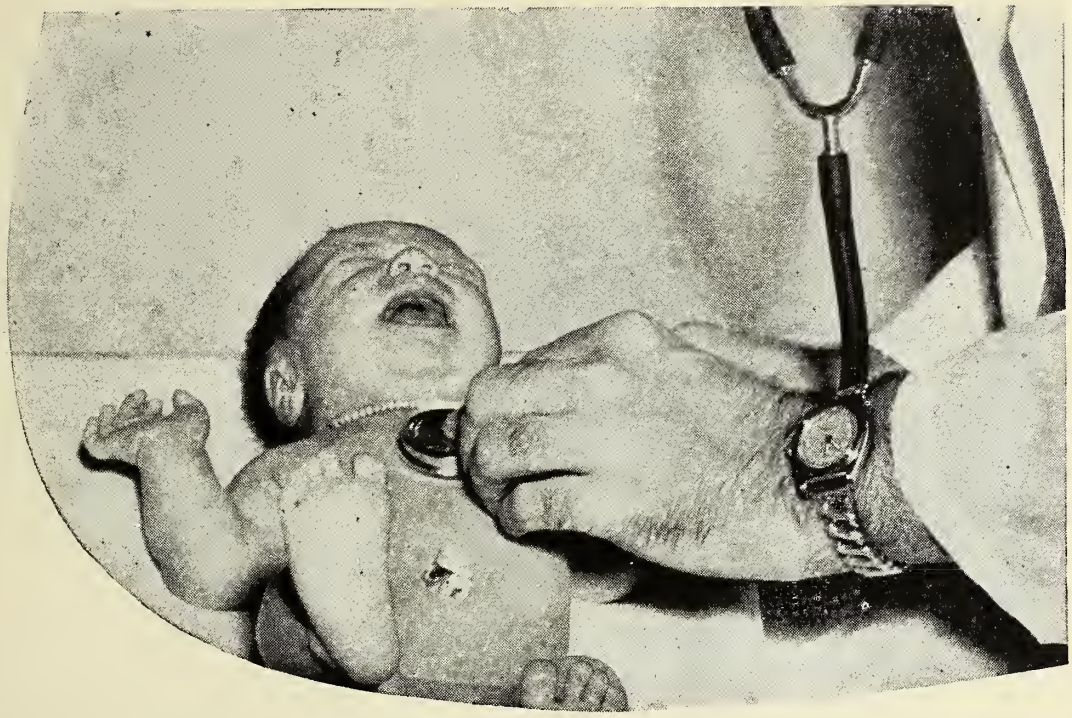
WILLIAM J. BERGER, M.D.

Dr. William J. Berger, 30, who had been practicing in DeSoto since his release from the Army medical corps last June, died in Kansas City in December after suffering a heart attack. A graduate of the University of Missouri, he spent two and a half years in Army service in Europe.

* * *

ALDEN LARUE CRITTENDEN, M.D.

Dr. Alden L. Crittenden, 63, physician and surgeon in Wichita, died January 20 after an illness of several weeks. He was graduated from Rush Medical College, Chicago, in 1912 and received his Kansas license in 1914. He was a member of the Sedgwick County Medical Society and a fellow of the American Medical Association. Dr. Crittenden limited his practice to surgery.



When life is measured in days

Not years, nor months, but days measure the life of a new-born infant. And during the first 30 days when infant mortality is at its highest, every effort must be made to minimize the hazards to life. At this critical time, the right start on the right feeding can be of vital importance.

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Scientists Isolate Polio Virus

Successful isolation of what they believe to be nearly pure polio virus has been accomplished by two Stanford University scientists, Dr. Hubert S. Loring and Dr. C. E. Schwerdt, it was announced last month. Laboratory tests, including photographs taken through an electron microscope, indicate that the isolated virus is 80 per cent pure or better. The experiments were financed by the National Foundation for Infantile Paralysis, from funds allocated to research.

In making the announcement Dr. Loring cautioned against any conclusion that isolation of the pure virus will lead necessarily to production of a successful vaccine against polio, and stated that a long and exacting experimental path lies ahead of scientists seeking this vaccine.

First, with the virus produced from a single type of polio at Stanford—and there are many different polio strains —the two scientists will attempt to produce a vaccine effective for cotton rats, which happen to be susceptible to the type of polio, Lansing strain, on which Dr. Loring and Dr. Schwerdt have experimented since 1943. Later the vaccine must be tried on monkeys, which are susceptible to most strains of polio.

One of the contributions resulting from this work is that scientists now know what the virus looks like, how big it is, and what its chemical characteristics and properties are. The virus, seen by means of the electron microscope, is a relatively spherical particle which is so infinitesimal in size that its diameter is estimated at 25 millimicrons, or 25 billionths of a meter. Chemically, the virus reacts as a protein, which the two chemists believe it to be.

Postgraduate Course in Radiology

The American College of Radiology has announced a postgraduate course for radiologists to be conducted March 30 through April 4 in Philadelphia. Only 100 radiologists will attend since registration is limited, and preference will be given those who served in World War II and those who qualified for last year's course but were unable to obtain admission.

Some of the subjects to be studied are neoplastic and inflammatory diseases, carcinoma of the head and neck, dosage calculation and tumor sensitivity in radiation therapy, carcinoma of the breast, blood and hemopoetic diseases, benign and malignant diseases of the skin.

Fellowships for Physicians

Applications for fellowships in postgraduate public health training for physicians for the school year beginning in the fall of 1947 will be received by the United States Public Health Service at any time prior to May 1, 1947, according to an announcement made recently by Surgeon General Thomas Parran.

These fellowships, made possible by a grant of $228,400 from the National Foundation for Infantile Paralysis, provide an academic year's graduate training of approximately nine months in an accredited school of public health, followed by three months of field training. Physicians applying must have completed at least a year's internship. Employees of state and local health departments, for whom federal grants-in-aid funds are already available, are not eligible.

Applicants may secure complete information by writing the Surgeon General, 19th and Constitution Avenue, N.W., Washington 25, D. C., Attention Public Health Training.

Questionnaire to Discharged Medical Officers

The American Medical Association has announced plans to mail more than 45,000 questionnaires to discharged medical officers of World War II, in accordance with a plan formed by the House of Delegates at its December 1945 meeting to "study the over-all needs and utilization of medical skills and resources of the nation in the case of an emergency." The resolution passed at that meeting follows:

". . . . that the Association undertake a critical study of the duties of medical officers during the war just passed, with special reference to (1) opportunities for study, research and actual treatment of the sick; (2) rotation of medical assignments; (3) quasi-medical duties for which technicians and specially trained enlisted personnel might replace physicians. . . ."

The committee studying the matter is a fact finding board hoping to make recommendations that will lead to better utilization of medical skills and resources in a future emergency. The cooperation of all former medical officers is solicited, and the committee especially invites covering letters if the questionnaire has omitted points the individual physician deems significant.

Refresher Course at K. U.

The University of Kansas School of Medicine announces that its next refresher course, to be given at the University Hospitals in Kansas City, February 24-27, will be devoted to pediatrics and public health work. The Kansas State Board of Health is cooperating by offering a stipend to pay expenses for approximately 40 doctors, with preference to those who are veterans of World War II and those who are conducting or assisting in "Well Baby" or "Well Child" clinics.

Complete information and programs may be secured from the University Extension Division, University of Kansas, Lawrence.

Error in Medical Slyd-Rul

Ciba Pharmaceutical Products, Inc., distributor of the medical Slyd-Rul which was sent to physicians throughout the country in December, has announced that a manufacturer's error in placement of a decimal point has resulted in incorrect conversion from 0.4 grain to gram. The figure shown, 0.25 gram, should be 0.025 gram. A new celluloid table correcting the error will be distributed as soon as possible.

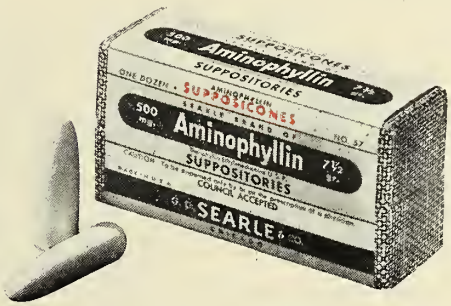
Residency at Southwestern Foundation

The Southwestern Medical Foundation, in cooperation with the Veterans Administration, is offering a three-year residency in neuropsychiatry. Two years are divided into eight-month rotation periods between the Dallas area and the VA hospitals at McKinney and Waco, Texas. The third year is elective, and investigative work is included.

Approximately one-half of the required time covers psychosomatic medicine and mental hygiene work, including child guidance. The other half is in-patient psychiatry.

Complete information may be secured from the secretary of the Dean's Subcommittee for Neuropsychiatry, Southwestern Medical College, 2211 Oak Lawn Avenue, Dallas 4, Texas.

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RESEARCH IN THE SERVICE OF MEDICINE

Personnel Placement Service Effective

More than 900 physicians of the United States took advantage of the opportunities afforded by the Psychiatric Personnel Placement Service, jointly operated by the American Psychiatric Association and the National Committee for Mental Hygiene, during its first year of operation. It is felt now that the emergency placement program has been completed, but the data relative to training and positions will be kept available to interested physicians through the National Committee for Mental Hygiene, 1790 Broadway, New York 19, New York.

National Heart Week

National Heart Week, under the auspices of the American Heart Association, Inc., is being observed throughout the nation from February 9 to 15, 1947, as part of an educational program launched by the Association to acquaint the population with the problem that exists and some of the ways in which its solution may be approached.

A pamphlet issued before National Heart Week presented mortality statistics for different age groups, and showed that diseases of the heart and blood vessels take the greatest toll of human lives each year. In addition, it gave an outline of the program of the Association and told of its research activities, postgraduate education for members of the medical profession, suggestions for community programs for control of rheumatic fever and rheumatic heart disease, and suggestions for education among the laity.

ANNOUNCEMENTS

February 7—Written Examination, American Board of Obstetrics and Gynecology, Inc. Change in requirements now effective provides that case records must be forwarded to the secretary's office from 30 to 60 days after candidates have received notice of eligibility for admission to examinations. Candidates will be examined in both branches of the specalty of obstetrics-gynecology. For information address Paul Titus, M.D., 1015 Highland Building, Pittsburgh 6, Pennsylvania.

February 10-11—Meeting, Federation of State Medical Boards of United States, Chicago, Illinois.

March 3-7—Postgraduate Course in Physical Medicine and Rehabilitation. University of Texas School of Medicine. Registration through Dr. Truman Blocker, Director of Postgraduate Study, University of Texas, Galveston. Fee, $5.00 per day; $25 for entire course.

March 8-9—Cancer Clinic, Topeka.

March 10-11—Cancer Clinic, Salina.

March 11-12—Cancer Clinic, Hays.

March 13-14—Cancer Clinic, Wichita.

March 15-16—Cancer Clinic, Parsons.

March 17-20—Sixteenth Spring Clinical Conference, Dallas Southern Clinical Society, Hotel Adolphus, Dallas, Texas.

March 25-26—Meeting, Kansas State Board of Medical Registration and Examination, City-County Health Center, Kansas City, Kansas.

April 28-May 2—Annual Session, American College of Physicians, Chicago, Illinois.

MAY 12-15—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, TOPEKA, KANSAS.

June 9-13—Centennial Session, American Medical Association, Atlantic City, New Jersey.

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FOR SALE—General practitioner's office equipment including roll top desk, blood pressure apparatus, scales, syringes, instruments, etc. Write the Journal C-O-62.

FOR SALE—Spencer microscope, triple objectives, plain stage, bell jar. Good condition. $75. Write the Journal 1-47.

DOCTOR RETIRING—Desires to sell practice and office equipment. Good location. Population 5,500. Write the Journal 2-47.

LABORATORY POSITION WANTED—Experienced technician available March 15. Hospital work preferred. B.A. in biology, University of Oregon. Qualifications and complete information on request. Write the Journal 3-47.

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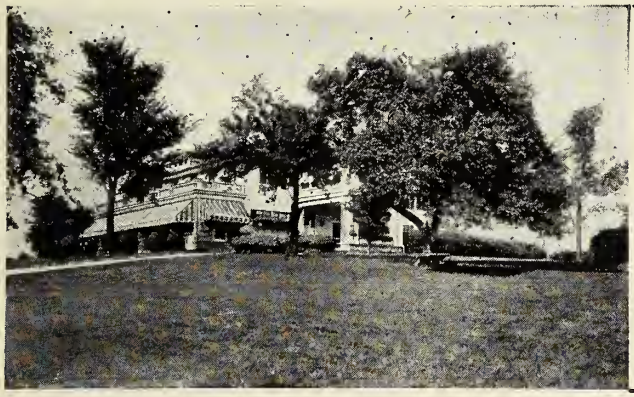
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Some milk is fortified with Vitamin D, the vitamin with the special property of preventing rickets. Vitamin D is added by any one of three methods; exposure of milk to ultraviolet light, adding a vitamin D concentrate, or feeding cows irradiated yeast.—Milk Facts, Milk Industry Foundation, 1946-1947 edition.

1947 dues are now payable. See the secretary of your county society.



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BOOK REVIEWS

Medical Uses of Soap. Edited by Morris Fishbein, M.D. Published by J. B. Lippincott Company, Philadelphia. 195 pages. Price $3.00.

This book is in its second printing, with a new chapter on "The Surgical Uses of Soap." Ten chapters make up the contents of this book and cover these subjects:

(1) Soap Technology—Those who have a special interest in chemistry and physics will find this chapter exceedingly interesting; those whose interest does not lie in these fields will nevertheless find it quite readable and pregnant with much useful information concerning the chemistry and manufacture of soap, the new detergents which are coming more and more into daily use, and detergency and cleansing action. This chapter gives a clear understanding of the composition of soap and what is meant by the different kinds of soap and will give a good foundation for understanding the effects of the use of soap. A few interesting illustrations of the manufacturing process are contained in this chapter.

(2) Usual or Normal Effects of Soap on the "Normal" Skin—The physiology and anatomy of the skin and how it is influenced or affected by the use of soap is ably and thoroughly discussed in this chapter.

(3) Unusual or Abnormal Effects of Soap on the "Normal" Skin—This chapter deals with the harmful effects of alkali, the clinical aspects of abnormal effects of soaps on the normal skin, the direct manifestations of soap damage, "winter eczema," and "housewife's eczema."

(4) The Effects of Soaps on the Abnormal or Diseased Skin—A discussion of the dermatoses in which soap and water should be used, and those in which they are generally contraindicated.

(5) The Effects of Soap on the Hair—An excellent chapter dealing with the anatomy and physiology of the hair and scalp discusses the care of the normal hair and scalp and the reasons for cleaning them. The effects of soap on some of the more common diseases of the scalp are outlined. Several points important in the care of the scalp in infancy are included.

(6) Soaps for Industry and the Industrial Worker—This chapter is devoted to the problems associated with the use of soaps in industry with specific reference to the types of soaps best suited for specific occupations as a cleaning agent for the worker. The use of soap is discussed from the point of view of both the worker and the employer. The employer's position as well as that of the employee, relative to the use of soaps for industrial processing is included. This chapter is excellent for reference by the physician whose practice yields an occasional or a small per cent of industrial cases.

(7) Soap for Shaving—This chapter will be of interest to any man who is burdened with the daily task of shaving and who has not been converted to the use of a mechanical shaver.

(8) Cutaneous Detergents Other Than Soaps—This chapter will give the reader a good understanding of the many cleansing agents other than soaps—more specifically the group classed as "surface-active agents." It gives consideration to the action in cleansing and endeavors to evaluate their proper place as a substitute, or in replacing soaps in medicine and surgery.

(9) The Medical Uses of Soap—The well-read physician will discover few new ideas for the medical use of soap in this chapter, however, it will serve as a good refresher.

(10) The Surgical Uses of Soap—The comment under Chapter IX above applies equally to this chapter.

The book is very readable, it is not too long or wordy, is well indexed and outlined, making it quite accessible for reference. This reviewer believes that the information contained in Chapter I will be a valuable addition to the physician's library.

The book is suitable reading and reference material for the medical student and nurse.—*V. M. Winkle, M.D.*

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Pneumoperitoneum Treatment. By Andrew Ladislaus Banyai, M.D., F.A.C.P., F.C.C.P. Published by C. V. Mosby Company, St. Louis. 376 pages, 74 illustrations. Price $6.50.

This book is a detailed analysis of the technique of and physiological changes caused by pneumoperitoneum as well as the complications and therapeutic applications of it. To one who is not very familiar with this procedure the author very satisfactorily explains the mechanics of it. This book is not easy reading but it is comprehensive and thorough.

The author states that pulmonary relaxation is the most important factor in the treatment of pulmonary tuberculosis and he believes that the reduction of the roentgenologic surface area of the lung is an accurate gauge of this relaxation. By means of numerous x-rays he shows that pneumoperitoneum causes a greater reduction of the roentgenologic surface of the lung than does a crushing of the phrenic nerve.

Many additional advantages of pneumoperitoneum over phrenic-phraxis are listed. Some of these are: (1) it is a reversible operation that can be adapted to the individual case or discontinued at any time during treatment; (2) it causes relaxation of the "good" lung and thereby protects it from the spread of the disease by aspiration from the opposite side; (3) by elevating the diaphragm and supporting it during coughing spells, pneumoperitoneum makes coughing easier and more productive, whereas paralysis of the phrenic nerve is sometimes followed by the opposite effect; (4) by virtue of the elevation of both domes of the diaphragm pneumoperitoneum creates a favorable condition for the healing of tuberculosis in both lungs while simultaneous phrenic nerve operation for the treatment of bilateral tuberculosis is not an accepted or feasible procedure.

The results of the pneumoperitoneum therapy of pulmonary tuberculosis are reviewed and it would appear that the procedure is of considerable merit.

A detailed review is given of the pneumoperitoneum treatment of 44 patients suffering from tuberculous-enterocolitis. While 25 of these patients died some were symptom free as long as two years and the author feels that the prognosis of intestinal tuberculosis is not necessarily hopeless and that complete healing sometimes does occur. He summarizes the pneumoperitoneum treatment of tuberculous peritonitis by concluding that it is a useful measure and that in properly selected cases symptoms and signs often disappear with dramatic promptness. He states that its use should be preserved for chronic and subacute cases and that extensive adhesions resulting from plastic peritonitis obviate pneumoperitoneum because of the impossibility of injecting air into the obliterated peritoneal cavity.

A rather comprehensive list of miscellaneous applications of pneumoperitoneum such as, tuberculous empyema, tuberculous salpingitis, pulmonary abscess, bronchial asthma, bronchiectasis, and pulmonary emphysema is also discussed.—*Henry S. Blake, M.D.*

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OBSTRUCTIVE LARYNGITIS IN CHILDREN CAUSED BY HEMOPHILUS INFLUENZAE BACILLUS TYPE B

Herbert V. Davis, M.D.*

Kansas City, Kansas

The importance of laryngeal infections caused by Hemophilus influenzae bacillus, type b, in children is not generally recognized. Unless the clinical features of this rapidly developing infection are recognized, in many instances proper treatment will not be instituted in sufficient time to prevent death. The clinical features of the disease and the proper treatment have been clearly described by Sinclair[1]. Other additional case reports by Aldrich[2] and Alexander[3] have subsequently appeared. The three cases in the present report are recorded here to call wider attention to this important disease.

CASE REPORTS

Case 1, B. H., an infant, 19 months old, entered the University of Kansas Hospitals, March 13, 1946, on the service of Dr. George Herrman, with the chief complaint of "difficulty in breathing." The boy was perfectly well until 11:00 p.m., March 12, when he cried out as if in pain. He then slept restlessly. Three hours later he was given an enema and again slept until 3:00 a.m., when he became more restless and cried as if he had pain. He again fell asleep until 4:00 a.m., when he woke and would not drink and the mother thought he had a sore throat. The family pediatrician was called at 5:00 a.m. and instructed the mother to give aspirin and to call him back if the child did not improve. At 6:00 a.m. the baby was breathing heavily with his mouth open; progressively the breathing became more labored. The boy was seen in the home by Dr. Herrman at 8:00 a.m., nine hours after the onset of symptoms. The patient seemed prostrated and it was uncertain whether the child would live long enough to get him to the hospital. He was admitted to the Children's Hospital at 9:00 a.m., March 13, 1946, ten hours after the onset of his illness.

The physical examination showed an acutely ill boy who was barely able to respond. His temperature was 102.2°. His respirations were labored and there was marked sternal and soft tissue retraction. He was not interested in his surroundings and did not resist being examined. The mucous membrane of the oropharynx was markedly red with considerable purulent mucoid discharge in the pharynx, which the patient would not or could not swallow. A membrane was not detected. The remainder of the physical examination was normal.

Admission laboratory data showed the urine to be negative; the white blood cell count was 25,650 with a differential count of 93 per cent polymorphonuclear leukocytes and seven per cent lymphocytes. An admission x-ray of the neck showed that there was a soft-tissue swelling of the larynx with distortions of the normal architecture in this region. On admission a culture from the oropharynx was placed on Loeffler's media and five hours later a growth of H. influenzae, type b, was recovered. A blood culture was also positive for the same organism. Oropharyngeal cultures were done on the other three members of the family. A positive culture for H. influenzae, type b, was found in the brother but not in the father and mother.

Admission medication consisted of two grams of sulfadiazine with equal parts of sodium bicarbonate given by mouth, 40 cc. of H. influenzae, type b, rabbit antiserum containing 50 mgm. of antibody nitrogen given intramuscularly. Because of increasing respiratory difficulty, cyanosis and deepening shock, a tracheotomy was performed with a dramatic alleviation of the labored breathing and cyanosis. Laryngoscopy showed an extremely red swollen glottis. Further medication consisted of 20,000 units of penicillin given every three hours, 0.5 Gm. of sulfadiazine with equal parts of sodium bicarbon-

*From the Department of Pediatrics, University of Kansas School of Medicine, Kansas City, Kansas.

ate every four hours, an additional two ampules of H. influenzae, type b, rabbit antiserum and parenteral fluids totaling 80 cc. plasma, 160 cc. whole blood, 1000 cc. 10 per cent glucose in distilled water, 500 cc. of Hartman's solution and 800 cc. of Hartman's solution containing sulfadiazine. All parenteral fluids were administered during the first 80 hours of hospitalization.

The following morning, 24 hours after admission, the boy was sitting up in bed, appeared comfortable and was having no trouble breathing. His temperature was 101° F. and the white blood cell count had dropped to 14,950. On the fourth hospital day the child appeared perfectly well, the temperature was 100° F. and the tracheotomy tube was removed. The following day the temperature, white blood cell and differential counts were normal. On the seventh hospital day all medications were discontinued and the boy was dismissed on the eighth hospital day having made an uneventful recovery.

Case 2, T. M., a boy, 6 years of age, entered the University of Kansas Hospitals, March 30, 1946, with the chief complaint of a sore throat, hoarseness, fever and swollen "neck" glands.

He was perfectly well on the evening of March 29, 1946. He was outdoors playing with the other children when he suddenly began to feel badly. The boy came into the house and was fretful, felt feverish and complained of a sore throat and swollen "neck" glands. He was given aspirin and went to bed. During the night he slept restlessly and snored loudly. The family physician was called and placed the child on sulfadiazine. The boy did not improve. When he attempted to take fluids, they were regurgitated through his nose. His voice took on a nasal quality and at times he was aphonic. The physician was again called and advised that the child be hospitalized, which he was at 9:00 a.m., March 30, 1946, 27 hours after the onset of his symptoms.

The physical examination showed an acutely ill boy, moderately dehydrated, with a flushed skin and a temperature of 100.4° F. His breathing was labored and stertorous. He had a nasal quality to his voice and talked irrationally, becoming aphonic at times. There was considerable cervical lymphadenopathy. The mucous membrane of the oropharynx was moderately red and injected. There was no detectable membrane. The remainder of the physical examination was normal.

Admission laboratory data showed the urine to be negative, the white blood cell count was 21,700 with a differential count of 93 per cent polymorphonuclear leukocytes and seven per cent lymphocytes. Admission culture from the nasopharynx was positive for H. influenzae, type b. A blood culture and cultures of the other members of the family were not done.

The therapeutic measures that were carried out consisted of continuation of the sulfadiazine, one gram every four hours with equal parts of sodium bicarbonate, 30,000 units of penicillin given every three hours and parenteral fluids. The morning after admission the white blood count had dropped to 9,300 with a differential count of 73 per cent polymorphonuclear leukocytes, 18 per cent lymphocytes and nine per cent monocytes. His temperature was 99.4° and the boy was lying comfortably in bed, breathing without difficulty. His voice was normal, having lost its nasal quality. On the third hospital day the temperature and blood count were normal. All medications were discontinued on the fifth hospital day and he was dismissed the following afternoon having made an uneventful recovery.

Case 3, L. E., a girl, two year of age, entered the University of Kansas Hospitals, May 26, 1946, with the chief complaint of "difficulty in breathing." The girl was perfectly well until 10:00 p.m., May 25, when she choked while chewing a piece of hard candy, a "life-saver." She had no immediate respiratory difficulty. During the night she slept very restlessly and would occasionally gasp for breath. The child awakened at 7:00 a.m., May 26, crying and complaining of a sore throat. She refused to drink fluids. At 9:30 a.m. she began gasping for breath more frequently, every 5-10 minutes, and the patient was taken to the local physician. He told the parents that the temperature was 101° F. and that the girl's throat was "inflamed" and prescribed some medicine. By noon of the same day there was marked repiratory distress with stridor and the girl was prostrated. The infant was then taken to another physician who diagnosed partial obstruction of the trachea and advised the parents to take the girl immediately to the University of Kansas Hospitals. The patient was admitted to the Ear, Nose and Throat Service at 4:00 p.m. of the same day, 18 hours after the onset of symptoms.

The physical examination showed an acutely ill girl, who was prostrated, and had a fever of 101° F. She was having considerable difficulty breathing with marked sternal and soft tissue retraction on inspiration. The mucous membrane of the oropharynx was very red and edematous. No membrane was detected. The remainder of the physical examination was essentially normal. The admission laboratory examinations showed the urine to be negative; the white blood cell count was 10,000 with a differential count of 70 per cent polymorphonuclear leukocytes and 30 per cent lymphocytes.

Shortly after admission she was fluoroscoped for a

possible foreign body of the trachea; the findings were negative for an opaque body. However, there was difficulty noted in the free exchange of air from both lungs, due to a midline obstruction. It was the radiologist's opinion that the obstruction could be accounted for on the basis of laryngeal edema. During the fluoroscopic examination the infant became limp, cyanotic and momentarily ceased respirations. Artificial respiration was induced and oxygen administered with partial relief from the cyanosis. She was immediately taken to the operating room to have a tracheotomy done. On laryngoscopy an extremely red swollen pharynx epiglottis and glottis were seen. The laryngoscopist felt that the process was one of infection and not a foreign body and it was his opinion that further introduction of the laryngoscope would merely traumatize the mucous membrane of the larynx, adding further to the respiratory embarrassment. He likewise felt that the respiratory distress was not great enough to warrant a tracheotomy. Hence, it was not done. The infant was sent back to the ward and was transferred to the pediatric service.

H. influenzae, type b, laryngitis was suspected. The patient was promptly placed in an oxygen tent and given 10,000 units of penicillin, 10 grains of sulfadiazine with an equal amount of sodium bicarbonate and 10,000 units of diphtheria antitoxin.

Following transfer to the pediatric service, further laboratory examinations were done. The findings showed that the white blood cell count had risen to 27,450 with a differential count of 89 per cent polymorphonuclear leukocytes and 11 per cent lymphocytes. A culture from the nasopharynx taken at this time was positive for H. influenzae, type b. A blood culture and cultures of the other members of the family were not done. Further therapy included the giving of 40 cc. of H. influenzae, type b, rabbit antiserum containing 50 mgm. of antibody nitrogen intramuscularly, penicillin, 10,000 units every three hours, sulfadiazine grains five with an equal amount of sodium bicarbonate every four hours, oxygen and parenteral fluids amounting to 1000 cc. of five per cent glucose in Normal Saline. The parenteral fluid was administered in divided amounts, as hypodermoclyses, over the first 36 hours of hospitalization.

The following afternoon, 24 hours after admission, the girl was sitting up in bed and was breathing easily. Her temperature was 100° F. On the fourth hospital day the child appeared perfectly well. The temperature, white blood cell and differential counts were within normal range. The following day all medications were discontinued, and she was dismissed on the sixth hospital day having made an otherwise uneventful recovery.

DISCUSSION

The clinical features of laryngitis caused by H. influenzae, type b, in children is quite typical. The onset is abrupt. The child becomes fretful, and if old enough, complains of a sore throat accompanied by difficulty in swallowing. There develops in extremely rapid progression, respiratory distress with inspiratory retraction of the sternum and soft tissues, cyanosis, hoarseness and a croupy cough. Prostration in these children is entirely out of proportion to the relatively short duration of the illness. The children are frequently limp and in shock as evidenced by their ashen gray pallor. These children sometimes are moribund within 8 to 12 hours after the onset of symptoms, particularly those under two years of age. The temperature ranges from 100° F. to 104° F. The highest temperature rise recorded in our patients was 102.2° F. in Case 1, 100.4° F. in Case 2, and 101° F. in Case 3.

Examination of the oropharynx usually shows it to be intensely red and edematous. The epiglottis and glottis are swollen and fiery red. Membranes are notable by their absence and exudate may or may not be present. In the past these infections have been confused with hemolytic streptococcal infections of the throat.

The principal laboratory findings are a marked leukocytosis of 15,000 white blood cells or more and a high polymorphonuclear leukocytic count of 80 or 90 per cent. The diagnosis can be confirmed by recovering the H. influenzae, type b, in cultures taken from the nasopharynx, the oropharynx, the larynx or blood.

The three cardinal therapeutic measures to be executed in H. influenzae, type b, laryngitis should include the performance of a tracheotomy for relief of respiratory obstruction, the administration of sulfadiazine and type b, H. influenzae rabbit antiserum, both of which are specific agents against this organism, and the administration of parenteral fluids to combat or prevent shock. It should be pointed out that all the patients in the series reported by Sinclair died who did not receive sulfonamides. The sulfonamide of choice, according to Dr. Hattie Alexander[5] is sulfadiazine. Alexander[3] has also shown that the specific influenzae rabbit antiserum and the chemotherapeutic agent, sulfadiazine, are more specific against influenzae infections than is either agent alone. It is our opinion that the specific rabbit antiserum should be used in all cases showing any respiratory embarrassment and toxicity. There should be no hesitancy in performing a tracheotomy in those children showing respiratory obstruction due to laryngeal edema with associated cyanosis and toxicity. Death results from a combination of mechanical obstruction to respiration and shock

caused by the overwhelming infection, plus the anoxia produced by the respiratory obstruction. It is best to err on the safe side and perform a tracheotomy before the patient becomes moribund. This was exemplified in Case 1 where there was a delay of two hours before a tracheotomy was performed. If vigorous and prompt therapy is instituted early in the course of the disease, recovery occurs rapidly within the next few hours.

The vast majority of H. influenzae infections in infants and children is probably caused by the H. influenzae, type b. The most frequent infection caused by this organism is meningitis; the next most common site of infection is the larynx. Occasionally there occurs an H. influenzae, type b, infection of the pericardium[6], endocardium[7] and joints[8] following the respiratory tract infection. Age is a factor in H. influenzae, type b, infections. Children over two years of age are more likely to have influenzae b laryngitis whereas influenzae b meningitis occurs more frequently in the age group under two years. H. influenzae, type b, are not recovered from the nose or throat of healthy persons very often as has been shown by Stillman[9] and Good[10], but H. influenzae, type b, can be isolated from some of the intimate familial contacts. This was illustrated by Case 1, where a brother had a positive nasopharyngeal culture for the influenzae, type b, organism, without symptoms of the disease.

The differential diagnosis rests with distinguishing H. influenzae, type b, laryngitis from that of catarrhal-laryngitis, spasmodic croup, diphtheria and hemolytic streptococcal infection of the throat. Catarrhal laryngitis differs in that the onset is more insidious and the patient does not appear as toxic. The respiratory embarrassment is not as great and cyanosis is usually absent. The polymorphonuclear leukocytic response is not as marked and nasopharyngeal—laryngeal cultures are negative for H. influenzae, type b. Spasmodic croup rarely presents any difficulty in the differential diagnosis. The abruptness of onset, often without premonitory and usually absent or minimal constitutional symptoms occurring in the early part of the night, with recession of all symptoms in a relatively short time characterize this illness. Diphtheria and H. influenzae, type b, laryngitis may simulate one another in their later stages but diphtheria differs in that its onset is more insidious, and early in the disease the symptoms are not so severe. Examination of the oropharynx or larynx reveals a typical membrane from which the diphtheria bacillus can be cultured. In the past H. influenzae infections have been confused with hemolytic streptococcal infections of the throat. There is no reason for this confusion to exist. In over a thousand cases seen at the New Haven Hospital by Powers and Boisvert[11], obstructive laryngitis caused by the hemolytic streptococcus was never encountered.

The demonstration of H. influenzae, type b, as a human pathogen was first made by Pittman[4] in 1931. While its role in the production of meningitis in infants is well established, the relation of this organism to disease in other parts of the body has been little appreciated. The failure to recognize H. influenzae, type b, as a human pathogen earlier is related to the fact as pointed out by Rivers[12] that there was no specific way of isolating the different strains of influenzae bacillus until Pittman[4] demonstrated that the smooth strain possessed a capsule showing type specificity. It was also shown by Thjotta[13] that growth on artificial media requires at least two specific factors, known as the X and V factors, both of which are found in red blood cells. Furthermore, unless a careful search for the colonies growing on artificial media is made, they can be overlooked. More rapidly growing organisms, like staphlococci, tend to overgrow the colonies of H. influenzae, type b. Finally, type b organisms must be differentiated from type a, influenzae bacillus. This can be accomplished by noting the typical capsular swelling that occurs when type specific antiserum is used to quell the organisms.

SUMMARY

(1) Three cases of acute laryngitis, one with bacteremia, caused by the Hemophilus influenzae bacillus, type b, have been presented.

(2) The attention of the clinician has been directed to the need for recognizing H. influenzae, type b, laryngitis in children so that proper therapy can be promptly started.

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DEMEROL AS A PREANESTHETIC AGENT

Charles A. Hunter, Jr., M.D., Ralph Hale, M.D.,
and Paul H. Lorhan, M.D.*

Kansas City, Kansas

Since the introduction of demerol to clinical medicine, many new aspects of the drug have been found. In this paper only one phase of the use of demerol is studied—its use as a preanesthetic agent in place of the time honored drug, morphine. The purpose of this study is to present the indications and contraindications for the use of demerol in preparing the patient for surgery.

Demerol, synthesized in 1939 by Eisleb and Schaumann[1], is the ester of 1-methyl-4-phenyl-piperidine-4-carboxylic acid. It has a certain amount of anticholinergic (atropine-like) action, producing suppression of the salivary glands, mydriasis, and protection of the cardiac muscle against vagal stimulation[2]. Demerol produces analgesia, sedation and euphoria similar to morphine. Lastly, it possesses a moderate spasmolytic action.

The atropine-like action of demerol is not strong. In using the drug alone in preanesthetic medication we noted that 14 per cent of the cases were rated unsatisfactory due to insufficient suppression of the salivary glands. For this reason it was found more desirable to combine small amounts of atropine with demerol.

As compared with morphine, the analgesic and sedative effects of demerol are of shorter duration. Its analgesic action ranks between morphine and codeine[3]. The time of onset of relief of pain following intramuscular injection is from five to 20 minutes, the maximum effect is achieved in 45 minutes to one hour, and the entire effect may be gone in three hours. Demerol may not give satisfactory relief from severe pain, especially if it is of somatic origin. Therefore, a patient who has been receiving large amounts of opiates preoperatively for severe pain needs more preanesthetic analgesia than demerol will ordinarily supply. The sedative action of demerol is "due to general reduction of all functions of the central nervous system, including the vomiting center[4]."

Respiratory depression from demerol is unusual, which is a distinct advantage over morphine[5]. Rovenstine and Batterman noted that "the respiratory rate returned to normal following a short period of hyperpnea in the initial excitement stage[6]." Occasionally, morphine will produce respiratory depression of such a degree that the induction phase of an inhalation anesthetic is prolonged. As with morphine, demerol produces respiratory depression in patients with intracranial lesions and in such cases the drug is contraindicated[7].

For older patients, namely those over 60 years of age, demerol was found superior to morphine because the depressant action is milder. In proper dosage, there was sufficient sedation, but no tendency toward the profound depression which is sometimes encountered in elderly patients who have received morphine.

One patient during this study was found to be sensitive to morphine, showing vertigo, nausea and respiratory depression. When this patient was given 75 mg. of demerol, he showed no untoward effects and was adequately prepared for surgery. Although morphine-sensitive patients are not commonly encountered, the anesthetist should be prepared to manage such cases.

The incidence of nausea and vomiting post operatively in relationship to the type of preanesthetic medication (morphine or demerol) was studied in a total of 211 cases. It was found that the percentage of patients showing postoperative nausea and vomiting with demerol was 22.4 per cent as compared to 17 per cent when morphine was used preoperatively. This series includes all types of anesthetic agents, ether, nitrous oxide-oxygen, cyclopropane, sodium pentothal alone and in combination with nitrous oxide-oxygen.

In preparing the surgical patient it is best to have a definite routine for the administration of the preanesthetic drugs. Naturally, it is frequently necessary or advisable to vary the routine to meet the individual requirements as they arise. At the University of Kansas Hospitals the following routine is used in order to obtain the maximum effectiveness of the preoperative medications at the time the anesthetic is scheduled to start.

A barbiturate, of the short acting group, namely, delvinal sodium, is given one and one-half hours prior to the start of the anesthetic. The dosage for the different age groups is: ¾ grain for 5 to 12 years and 1½ to 3 grains for adults, depending upon the type of individual and the anesthetic agent. No barbiturates are given to those under 5 or over 60 years of age.

Demerol or morphine is given one hour prior to the start of the anesthesia. Demerol is given intramuscularly in the following doses: 50 mg. for 12 to 15 years of age, 50 to 150 mg. for 15 to 60

*From the Department of Anesthesiology, Hixon Laboratory for Medical Research, University of Kansas Hospitals, Kansas City, Kansas.

years of age, depending on the individual patient, and 50 to 75 mg. for those over 60. No narcotic drugs are used in patients below the age of 12.

With demerol it has been found best to use small doses of atropine. Early in the series atropine was sometimes used in full doses together with demerol. One patient who received 100 mg. of demerol and atropine gr. 1/150 showed evidence of toxic atropine-like effect, including vagal escape of the heart. The following small doses of atropine are most desirable to use in combination with demerol: 1/450 to 1/200 grains of atropine in patients requiring 75 to 100 mg. of demerol, depending mainly on the type of individual and the type of anesthetic agent.

By using the above preanesthetic routine, the maximum effect of the drugs is obtained at the start of the operation, thus affording ease in the induction and maintenance phases of the anesthesia. Again it should be emphasized that this rotuine is only a working basis and that the individual variations for each patient must be carefully considered before prescribing the preanesthetic medication.

In evaluating any preanesthetic medication of a patient, the anesthetist should ask himself, "Is the patient adequately prepared for the anesthesia?" This should be determined immediately before the anesthetic agent is administered in the operating room. It is by this clinical evaluation that the anesthetist may readily determine the effectiveness of the preanesthetic drugs. In our study of demerol as a preanesthetic agent, we compared the effectiveness of demerol and morphine.

The following table represents a study of 112 patients receiving demerol or morphine for preanesthetic medication. Demerol was used in 57 consecutive cases and morphine was used in 55. All types of cases are included in this series, regardless of sex, age, anesthetic agent, or operation. By such a comparison we have found that the patient who is to receive an anesthetic may be adequately prepared by the proper use of demerol in place of morphine.

Table 1

Comparison of demerol and morphine in regard to preanesthetic medication.

(Demerol 75 mg. is equivalent to morphine sulfate gr. 1/6)

Demerol (75 mg.):		
Number of cases	57	
Satisfactory rating	52	
Unsatisfactory rating	5	8.8%
Morphine sulfate (grain 1/6):		
Number of cases	55	
Satisfactory rating	50	
Unsatisfactory rating	5	9.1%

SUMMARY

Advantages of demerol as a preanesthetic agent:

1. It is a satisfactory analgesic and sedative drug, affording ease in induction and maintenance phases of a patient undergoing anesthesia.
2. There is little or no respiratory depression from demerol, which makes for better exchange of oxygen and inhalation anesthetic agents.
3. Demerol is more desirable in the older age groups because of its shorter duration of action and less respiratory depression.
4. The atropine-like effect of demerol produces partial drying of the mucous membranes.
5. It is useful in morphine-sensitive patients.

Contra-indications for the use of demerol as a preanesthetic agent:

1. Patients with severe pain.
2. Patients with intracranial lesions.
3. Children under 12 years of age.

CONCLUSION

The use of demerol as a preanesthetic agent at the University of Kansas Hospitals has been reviewed and has been found to be a satisfactory substitute for morphine sulfate.

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The question which I have been discussing is partly a medical question, but above all it is a governmental question. I hope the doctors will take an active and continuous interest. If the doctors take the position that everything is rosy in the best of all possible worlds, and nothing need be done, they are likely to be swamped politically by the demand for increased medical service. I have felt that the attitude of some of the medical associations has been almost completely negative. It is up to the doctors to recognize that there is a problem and to take an active part in working out the solution to that problem. The bill which we have presented is not perfect. Every word should be examined and considered. But if the doctors do take an active part, they will have the enthusiastic cooperation of that large majority of Congress who fear more than anything else in the world the increased concentration of power in the hands of the federal bureaus. It is up to us to show that a government based on liberty of the individual, of the professions, and of local communities can assure better social service to its people than the most efficient of socialistic states.—Senator Robert Taft at a meeting of the Wayne County Medical Society, Detroit, October 7, 1946.

AN APPENDIX EPIPLOICA RESEMBLING A VERMIFORM APPENDIX

Homer B. Latimer, Ph.D.,
and
Alfred H. Hinshaw, M.D.*

Lawrence, Kansas

The cadaver with this unusual epiploic appendage was being dissected in the course in gross anatomy for the first year medical students. Nothing unusual had been noticed until the abdominal cavity was opened, and then what appeared to be a normal vermiform process was seen lying adjacent to the terminal part of the ileum. Later on in the dissection, a true vermiform process was discovered lying in the retrocaecal and retroperitoneal position. At this time, a more careful examination showed that this first diverticulum was really an unusual appendix epiploica and not a true vermiform process as it had first been called.

We wish to express our appreciation of the careful work of Mr. Leonard Akes and Mr. Frank Cvetkovich, the medical students who were dissecting this cadaver, for recognizing this unusual condition, or a double appendix as it was first called, and then asking for assistance in solving the problem. We also wish to express our appreciation of the careful and accurate work of Mr. Sherman Saffier in making the drawing of this dissection.

The appendices epiploicae are usually described as small saclike diverticulae of the peritoneum of the colon, filled with fat. Their most frequent locations are given, but in none of the texts consulted, including Surgical Anatomies, was there any description of them that would justify a reader in thinking that they were of any consequence or of any clinical importance. However, when a search of the literature for cases of these appendices epiploicae was begun, a surprisingly large number of cases was found described in the journals. It was very soon discovered that they were frequently the source of abdominal pain of sufficient intensity to warrant operation.

An intra-abdominal torsion of the epiploic appendage may cut off the blood supply to the appendage resulting in gangrene or fat necrosis. The sudden and rapid torsion may completely sever the appendage from its stalk and thus produce foreign bodies varying from the size of a pea to a hen's egg (Hunt, 1919). Less frequently, two epiploic appendages may become adherent and thus produce intestinal obstruction (Baumeister et al., 1938). Also, they are often involved in a hernia. Kirkham and Zerlin (1943) state that, "The signs and symptoms of torsion of these tabs may simulate acute appendicitis, acute gall bladder disease or diverticulitis and thereby lead to diagnostic error." They admit that these are of rather rare occurrence and state that about 60 cases have been reported in the literature, and then they proceed to add another case.

Hunt (1919) has carefully reviewed the earlier cases of appendices epiploicae, beginning with a case of an appendix epiploica forming a foreign body described as early as 1703 by Littré. In 1936, Fiske brought the list of appendices epiploicae to date, beginning at the time of the work of Hunt in 1919. He added two additional cases of his own. In reviewing 42 cases of torsion of the epiploic appendage, Fiske says, "A correct pre-operational diagnosis was not made in any of the cases reviewed. The diagnosis of appendicitis in some form was the most frequent error. Among the pre-operational diagnoses made were torsion of ovarian cyst, diverticulitis, tumor of sigmoid, tubo-ovarian disease, cholelithiasis, degenerated myomata, intestinal obstruction and paralysis and peritonitis."

Byberg and Lam (1945) describe a new case and then they say, "This case is reported because it adds another to a list of about 62 published instances of acute inflammation of the epiploic appendages . . ." They also add, "The appendices epiploicae may have more surgical significance than is generally recognized."

We are reporting this case not because it was diseased, but because in its position, size and shape it so closely resembled a vermiform process that it was at first mistaken for a true appendix, and because a similar appendix epiploica with a retrocaecal vermiform process might be mistaken for the vermiform process in a surgical patient.

This unusual appendix epiploica was found in the body of a 64-year-old colored male. The death certificate gives heart disease as the cause of death. He was tall and well nourished but not obese. A moderate amount of fat was found in the abdominal wall and the greater omentum and mesenteries were well filled with fat. The greater omentum had many small fatty masses protruding from it in many areas. The appendices epiploicae were fairly abundant and the majority of them were no larger than usually found in a well nourished cadaver. A few of the appendices epiploicae were longer and somewhat more slender than usual.

*Department of Anatomy, University of Kansas.

The terminal part of the ileum looped down into the pelvis extending slightly below the brim of the pelvis minor. It then ascended and terminated in a normal manner (I. in Figure 1) by opening into the caecum. The terminal part of the caecum (C. in the figure) appeared to be somewhat more sacculated than usual. The taenia libera was clearly seen along the anterior surface of the caecum, and the terminal part of the taenia mesocolica could just be seen as it came around from the posteriomedial side of the colon to meet the other taeniae at the distal end of the caecum. The taenia libera and taenia mesocolica are marked "T" in the figure. The sacculation shown in the figure at the anterior terminal part of the caecum was large but not exceedingly so.

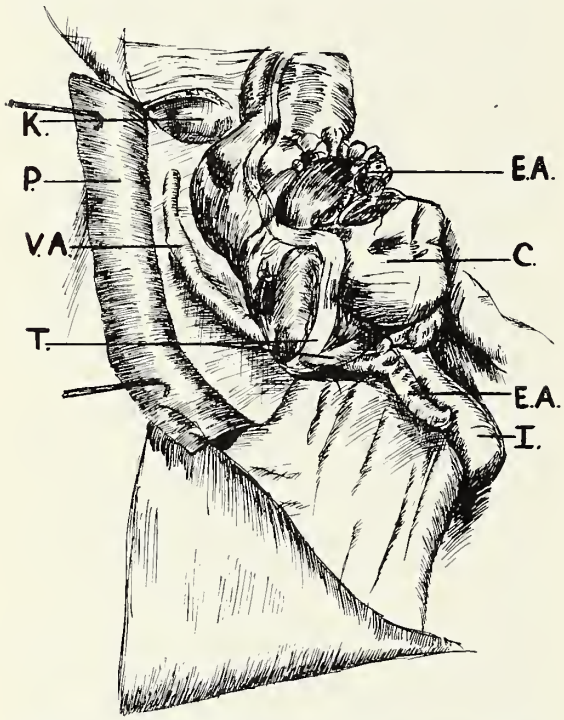


Fig. 1. Drowing showing the position of this unusuol oppendix epiploico. The posterior peritcneum is shown drown to one side to show the true vermiform oppendoge (V.A.).
K.—lower pole of right kidney
P.—peritoneum, shown drown oside
V.A.—vermiform process, pulled to right from behind the coecum
T.—toenio coli
E.A.—oppendix epiploico
C.—coecum
I.—ilium

Extending inferiorly along the terminal part of the ileum, and with its peritoneal covering somewhat fused with the peritoneum of the ileum, was this appendix epiploica (E.A. in the figure). It was about 3.5 cm. long and it had a diameter of about 7 mm. It was slightly darker in color than the vermiform process and also a little darker than the adjacent ileum. It was much softer to the touch than either the ileum or the vermiform process. It had a conical distal end and the tip was curled slightly, as shown in the drawing. Upon more careful examination it was found to have no lumen, but to contain fat and blood vessels. Moreover, it was attached only to the peritoneal covering of the caecum and not firmly attached to the thickness of the caecum as the vermiform process should be.

Then after a more careful examination of the caecum, the true vermiform process was found in the retroperitoneal and retrocaecal position. The vermiform process was 10 cm. long and about 5 mm. in diameter. It was firmer to the touch and slightly lighter in color than the epiploic appendage. The vermiform process was slightly more yellowish in color. This cadaver had been embalmed in a phenol mixture and hence the color values were not as good as they would have been with formalin preservation. The vermiform process was securely attached to the caecum in a normal manner, at the junction of the three taeniae coli. The drawing (Figure 1) shows the vermiform process pulled slightly to the lateral side of the ascending colon after the peritoneum had been cut, and it also pulled to the lateral side. This vermiform process was a little longer than the average length of the vermiform processes found in the cadavers, and it extended to within about 2 cm. of the inferior pole of the right kidney. Before the vermiform process was dissected and pulled laterally, so that it would show in the drawing, it lay directly posterior to the caecum and the ascending colon. Only the lower pole of the kidney (K.) is shown in the drawing. The taenia mesocolica and taenia libera, both shown in the drawing, united with the terminus of the taenia omentalis, which is on the posterior side of the caecum and not shown in the drawing. All three taenia united and continued into the continuous longitudinal muscular layer of the vermiform process in a typical manner.

In conclusion, we are calling attention to this appendix epiploica because of its unusual shape and position and the possibility that, if during a laparotomy a similar condition were found, the appendix epiploica might be mistaken for a true vermiform process.

Many cases of torsion of the epiploic appendages are reported in the literature and it does seem that a little more attention should be given to these appendages epiploica in the text books.

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CANCER OF THE COLON AND RECTUM

More than 5% of all cancer deaths are due to cancer of the anus and rectum. The large and small intestines account for almost 12% more. (Few of these are in the small intestine.)

A large percent develop in the sigmoid and rectum and of these 90 to 95% are within easy reach of the examining finger, the rectoscope or the sigmoidoscope.

Routine digital examination of the rectum as a part of every physical or periodic health examination will lead to early diagnosis in many of these lesions.

Symptoms may include change in bowel habit, bleeding, anorexia, dyspepsia, nausea, vomiting, anemia, pain, or any symptoms referable to the anus or rectum. Bleeding is more often due to a growth than to hemorrhoids and demands thorough investigation.

Diagnostic measures include a careful history and physical examination, digital examination of the rectum, proctoscopic and sigmoidoscopic examination, biopsy, stool examination for occult blood, and radiological examinations.

Surgical extirpation of the segment involved with a wide margin of normal bowel and the regional lymph nodes is the treatment of choice. The results in early cases are excellent. All cases should have surgical treatment early inasmuch as symptoms appear early from the local lesion and metastases tend to occur late.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

House Bill 178, introduced during this session of the legislature by two of the three osteopathic members, has been analyzed by the attorney for the Kansas Medical Society. A summary of his remarks is presented here to inform the membership of one phase of the 1947 legislative picture.

House Bill 178, in effect, repeals existing statutes relating to the examination and registration of doctors of medicine, to the examination and registration of osteopathic physicians and establishes a composite board to examine and register both groups. The composite board shall consist of five members of the medical profession and two osteopaths. Although at least three affirmative votes shall be required before a license will be issued, the medical membership on the board will actually have almost no voice in the consideration of osteopathic applicants. A provision requires that "the examination in materia medica and therapeutics and in the theory and practice of medicine shall be conducted by those members, only, of the board who are of the same school of practice as the applicant claims to follow." Also in the bill is the statement that the two osteopathic members of the board, alone, shall determine which osteopathic schools are approved.

Of interest also is the provision that osteopaths may be given two types of licenses. The first shall be a certificate to practice medicine and surgery but "shall not authorize such osteopathic physicians to perform any surgical operation by use of instruments where a general or spinal anesthetic is used . . ." Such a license shall be issued to all osteopaths who for one year preceding February 1, 1947, had a Kansas license. This, it should be understood, will include not only those osteopaths practicing in the state today but the many others now practicing elsewhere who have Kansas licenses. Under this license the osteopath will be entitled to do minor surgery and a wide range of major surgical work through the use of local and other types of anesthetic agents. It is also presumed that the license to practice medicine will entitle the osteopath to use drugs and narcotics.

The bill also provides that those osteopaths passing a special examination or who otherwise give evidence of their proficiency in surgery will be issued a special license to do surgery. According to the wording in the bill, it is entirely possible that here again the two osteopathic members of the board, and not the doctors of medicine, will give this special surgical examination.

The attorney explains that "it is not progressive legislation in Kansas and produces a situation which many years ago caused the osteopaths to demand and obtain their present separate board of examination and registration. In 1913, I think it was, the osteopathic profession demanded its own separate registration and examination board. Now, by House Bill 178, they attempt to revert to conditions existing prior to 1913, of which they complained most bitterly and, in an effort to correct, sought and obtained their own board of examination and registration."



President

EDITORIALS

University of Kansas School of Medicine

The Kansas Medical Society takes pride in presenting this first annual University of Kansas School of Medicine issue. In future years one issue of each volume will be devoted to the university and will present scientific papers, editorials and news matter either from or about the university.

As is often the case when an organization functions without display, many who avail themselves of its services fail to realize the scope of its activities and the number of persons necessary to make those services available. In an effort to present a true over-all picture of the University of Kansas School of Medicine, the Journal here records a few historical and statistical facts about our own state school.

The school of medicine was first visualized by the late Dr. Simeon B. Bell, a practicing physician in the Rosedale district of Kansas City, Kansas. His dream was of a hospital available to all classes of patients, rich and poor alike, and he offered the university a block of land and the sum of $40,000 for the purpose of constructing that type of institution. Accordingly, the school was organized in 1905, but the original tract given by Dr. Bell was later considered unsuitable. The present site was purchased by the city of Rosedale and subscriptions of the faculty and alumni in 1922.

The school of medicine now includes 10 buildings worth approximately $5,000,000 at present day cost. The old buildings, located a mile from the present campus, are valued at $200,000.

Four Kansas and Missouri colleges that had operated prior to 1905, the Kansas Medical College, Topeka; the Kansas City (Kansas) College of Medicine and Surgery; the Medico-Chirurgical College of Kansas City (Missouri), and the Kansas City (Missouri) Medical College, were absorbed by the new school of medicine and faculty members also were transferred to the new institution.

Dr. Mervin T. Sudler, now of Lawrence, came to Kansas in 1906 to become dean of the scientific department at the new school, while Dr. George Howard Hoxie served as dean of the clinical department. Several associate deans were also listed during the early years of the school's operation. Under a plan inaugurated in 1912 providing for a single dean of the school, Dr. Sudler continued to serve until 1924, when the present dean, Dr. H. R. Wahl, began to administer the affairs of the institution.

The physical properties of the school of medicine have been increasing during the years. The faculty, including those teaching at Lawrence, now numbers 230 persons. Approximately 100,000 patients are seen during the course of a year, with 9,000 of that number receiving hospital treatment. Fifteen rooms of the hospital's 400 are maintained for private patients, 40 for semi-private patients, and the remainder for clinical, county and free teaching patients, classifications outlined in the State Institutions article on Page 120 of this issue. Although hospital admissions are necessarily limited by space available, no restrictions exist for the out-patient department and all who appear at the out-patient clinic are seen.

The school of medicine is justly proud of the many departments recently added to its curriculum, courses in psychiatry, public health and hematology. In addition, there is an exceptionally well developed speech clinic, and the school boasts extensive physical medicine, physiotherapy and occupational therapy departments, and courses for dietitians, laboratory technicians, and x-ray technicians. With research grants totalling $13,000, a study of poliomyelitis is being conducted in the clinical bacteriology department under Dr. Werner.

Appoximately 90 per cent of the students at the school of medicine are from Kansas, and the other ten per cent come from all parts of the nation and from foreign countries. For a number of years it has happened that at least one foreign student has completed his work with each graduating class. These foreign students ordinarily return to their home countries to practice, so a number of "Missionaries" are now spread throughout the world taking the name of the University of Kansas School of Medicine to patients of all races. One student who will complete his work at the university soon will return to his home in Iran to practice. Another student returns this summer to India where she will manage a small hospital in addition to practicing her profession.

The number of students in the different departments fluctuates from year to year but the following figures will serve to indicate the number currently enrolled in different courses: undergraduate students, 289; graduate students, 47; residents, 40; interns, 12; nurses, 110; laboratory technicians, 19; dietitians, 4; physiotherapists and occupational therapists, 28. Seventy-three students will be graduated during the course of the present year.

A list of locations in which graduates of the University of Kansas School of Medicine are now practicing would be of interest, but information for compiling that material is not available. The records of the Kansas Medical Society, however, show the locations in which university graduates are practicing within the state.

A little more than 40 per cent of the members of the Kansas Medical Society are graduates of the university or of one of the four medical colleges absorbed by the university. These doctors have located in all sections of the state and in almost any given area are represented in a ratio comparable to that of the state as a whole. There are comparatively few counties in which a graduate of the University of Kansas is not practicing and those counties represent lesser populated areas with few physicians.

As might be expected, Wyandotte county has the largest number of graduates of the university, with 43 per cent of its membership trained in Kansas. The other two most populous counties, Sedgwick and Shawnee, are below the state average at 22 and 26 per cent, respectively.

Several new buildings for the school have been planned in recent years, but no construction work was possible during the war and costs have been prohibitive recently. The Kansas Legislature, in its 1945 session, appropriated $350,000 for the construction of a new surgical building, a sum which seemed adequate at the time. Construction costs have increased, however, and that amount of money would not suffice for the building planned, so construction will be postponed until more funds are available.

More immediate plans concern the construction of a $100,000 student union building. Subscriptions from alumni members and others have already raised a fund of more than $60,000 and actual construction may be begun next year.

In addition to offering its services to the lay people of Kansas, the university school of medicine has also offered advantages to the physicians of the state through specialty courses, postgraduate work, clinics, etc. Through this type of cooperation the best medical interests of the people of Kansas are served.

The Discovery of Anesthesia*

The date of October 16, 1846, stands out in the realm of surgery as one of the greatest days in history for it was upon that date that Dr. William T. G. Morton demonstrated to the world the practicability of rendering a patient unconscious and thereby making him insensible to pain. If one can imagine the suffering and fear that the patient endured before that date, the patient of today would rather die than submit himself to a surgical procedure. The numerous advances that have been made in surgery today are all due to the pioneering of such illustrious men as Long, Wells and Morton and it is through their courage and perseverance in the face of numerous obstacles and skepticism by the profession that the anesthesiologist of today derives his heritage.

William Thomas Green Morton was born in Massachusetts from humble parents. He studied dentistry in Baltimore and was a successful practitioner in his field in Boston. Doctor Morton, early in his career, was conscious of the patients' sufferings and experimented with various drugs and hypnotism in connection with the painless extraction of teeth and in 1844 he was associated with Dr. Horace Wells in his investigations of nitrous oxide gas. After the failure of Wells' experiment, he tried chloric ether with unsatisfactory results. At the suggestion of Dr. Charles Jackson, Morton at that time being a student of medicine, experimented with sulphuric ether, beginning his experiments on animals. He was quite successful and his endeavors encouraged him to make a personal experiment and in September, 1846, he inhaled ether from a handkerchief while sitting in an operating chair. He became unconscious and several minutes later upon arousing from his slumber he decided to inhale the drug once more and submit himself to a dental extraction while under its influence. However, fate intervened for at that moment a man named Eben Frost whose face was swollen and who was suffering intensely from an abscessed tooth walked into his office. Frost desired to be hypnotized, but readily consented to take ether when assured that it was superior to hypnotism. To the joy of the operator and the astonishment of the patient the extraction was successful and without pain and thus was accomplished the first operation under ether anesthesia.

Morton then proceeded to obtain an opportunity for the public demonstration of the practicability of ether anesthesia. This opportunity was rendered him by Dr. John C. Warren, to whom great credit is due for offering Morton the time and place. Dr. Morton was invited to appear in the surgical amphitheatre of the Massachusetts General Hospital on October 16, 1846. Dr. Warren had obtained the consent of Gilbert Abbott, aged twenty, single, and a painter by trade to have a vascular tumor removed from the left side of the neck. The entire Harvard Medical class was present, as well as several prominent physicians and surgeons whom Dr. Warren had invited to witness the demonstration. As for the patient he was seated in a red plush operating chair listening to Dr. Warren, as were all the assembled guests, deliver his lecture on the nature of the tumor and why he intended to remove it. Then he came to the matter regarding the administration of the anesthetic. His exact words have not been preserved for posterity; but this is

*Written by Paul H. Lorhan, M.D., Department of Anesthesiology, University of Kansas School of Medicine, Kansas City, Kansas.

what he may have said, "Gentlemen, during my career as a surgeon, I have tried many and sundry things to relieve the pain, but when I have applied the knife to the living tissue of the patient he has always cried out from the severe pain. It has been brought to my attention by Dr. William T. G. Morton that he possesses an agent which he claims will prevent this pain. However, I am quite skeptical; but, nevertheless I believe, that we as physicians should be willing to try anything that gives any expectation. Therefore, I have asked Dr. Morton to administer the agent to Mr. Abbott who has gladly consented." However, to the consternation of all present Morton was not there as he was delayed in obtaining his apparatus. Warren waited for a short while and was about to operate in the usual manner without anesthesia when Morton entered the room in great haste. Upon seeing him, Warren told him his patient was ready to be put to sleep. Dr. Morton advanced forward carrying a large glass globe nearly the size of a man's head, somewhat resembling a crystal gazer's ball, but having an opening at the top and a spout leading out the side. The contents of the the globe was not known to anyone except that Morton called it a sleep producing "compound."

Morton then walked over to the patient and instructed him what he would do and the sensation that would be produced. Abbott took the spout in his mouth and began to breathe deeply, back and forth, into the globe. The patient followed Morton's instructions implicitly. Shortly thereafter he began to cough and squirm a little, but gradually calmed down. His breathing became more regular, deeper and quiet. His face flushed. The lips relaxed slightly so there was a spluttering sound on the spout. The patient showed all signs of being asleep. Morton gave the "compound" a little longer as he remembered Wells' previous failure when he removed the mask too soon. Then he removed the inhaler and nodded to Dr. Warren saying, "The patient is ready, Doctor." Dr. Warren made his first incision. Alas, there was no cry, no pain, no thrashing about on the table. The operation progressed, without the patient exhibiting any signs of pain. Finally, the tumor was out, the incision closed and still no outcry. Upon the completion of the operation the assembled audience looked aghast as the patient gradually returned to consciousness. Dr. Warren then inquired of the patient whether he felt any pain, and to his astonishment the patient shook his head "no."

Turning slowly to the audience, Dr. Warren exclaimed with great feeling his opinion in five historic words. "Gentlemen, this is no humbug." Thus was born the specialty of anesthesiology as it is known today. Man's conquest over pain was triumphant. Morton achieved the impossible. He had successfully prevented the pain of surgery before a public demonstration. He entered the operating room an obscure man, left it an immortal.

The centennial of this epoch making discovery was celebrated on October 16, 1946, in the Massachusetts General Hospital in Boston, at which the prominent men of anesthesiology, surgery and medicine paid homage to Dr. William T. G. Morton, Conqueror of "PAIN."

April Is Cancer Month

During the month of April, 1947, as in years past, the annual campaign to collect funds for fighting cancer will take place. Preliminary plans for the campaign throughout the nation were made months ago by the American Cancer Society, and the intensive drive, along well organized lines, will start April 1.

Citizens of Kansas have never lagged in contributing generously during the campaign, and it is confidently expected that no difficulty will be experienced in meeting the quota set for 1947, $120,912. However, since physicians play a part in the fight against cancer that differs from that assigned to laymen, the figures presented here will deal with plans for allocating the money collected rather than with the need for contributions.

Forty per cent of the quota, $48,364.80, will be sent directly to the offices of the American Cancer Society, where it will be further divided for varied activities, three-fifths for research and two-fifths for a program of education on a national level.

Mr. Harry Dawdy, executive director of the Kansas Division of the American Cancer Society, reports that plans have been completed for allocation of funds that will remain in the state. On the basis of the quota set for Kansas, the state will retain $32,047 for cancer education. Physicians will benefit through an educational program worked out by the Kansas Division in cooperation with the Kansas Medical Society Committee on Control of Cancer. Laymen will receive cancer education through a program designed to reach civic organizations, luncheon clubs, schools, etc.

After educational requirements have been met, the quota set for Kansas provides $40,500 for the establishment and maintenance of clinics and treatment centers at various locations in the state, upon recommendation by the Projects Committee of the Kansas Division.

Physicians are the first to appreciate the work of the American Cancer Society and to recommend wholehearted cooperation with its projects, both financial and educational. In addition, they can support the work of the organization by speaking in its behalf whenever the opportunity to do so presents itself. For several years the Kansas Medical Society has supplied speakers on request, and again this year will accept the responsibility of providing a speaker for any organization, school or private group that asks for this service. Members of the Committee on Control of Cancer have volunteered their services and will fill engagements close to their homes, but a number of other physicians are needed throughout the state since requests may come from any area. Those willing to cooperate in this project during the month of April are asked to notify the Executive Office, 512 New England Building, Topeka, Kansas, and calls from their areas will be referred to them as they are received.

88th Annual Session, May 12-15, 1947

With only minor details yet to be arranged, committees are now completing plans for the 88th annual session of the Kansas Medical Society, to be held at Topeka, May 12-15, 1947. Members of the host group, the Shawnee County Medical Society, have spared no effort in arranging a program of interest to every physician in the state.

Eleven nationally known specialists have agreed to take part in the scientific program, and invitations have been extended to two others whose replies have not yet been received. There will be papers of interest to every doctor in Kansas, specialists and general practitioners alike, in addition to a complete program for physicians interested in EENT work.

The committees in charge of the various social events which are regularly a part of the annual meeting have made few announcements of their plans, but they advise that all will be pleased with the informal program at the Topeka Country Club following the golf tournament and skeet shoot on May 12, with the alumni banquets on May 13 and with the program following the annual banquet at the Topeka High School cafeteria on May 14, with members of the Auxiliary to the Kansas Medical Society as guests. In addition, there will be round table luncheons for all medicine and specialty groups each noon.

Although alumni banquets have not been a part of the annual meetings of recent years, their inclusion in this year's program has been greeted with enthusiasm. Arrangements are now being concluded with the various Topeka hotels to provide banquet space for the different groups. The University of Kansas School of Medicine, of course, will be the largest group, but a number of other schools have 25 or more graduates practicing in Kansas. A recent check of the membership of the Kansas Medical Society indicated the following number of graduates for the different schools having 25 or more: University of Kansas, 509; Northwestern, 70; University Medical College of Kansas City, 96; St. Louis University, 62; Rush Medical College, 62; Kansas Medical School, 56; Washington University, 48; Creighton, 47; Illinois, 34; Nebraska, 29; University of Louisville, 26; Kansas City Medical College, 25. Several other schools having slightly smaller numbers of graduates will also have groups large enough for alumni banquets.

Reservations are now being received for space for scientific exhibits in the Topeka Municipal Auditorium, where all scientific sessions will be held, and for commercial exhibits. All commercial exhibitors of former years and others who had indicated an interest in the Kansas meeting were advised of the date of the meeting many months ago and were recently sent outlines of the floor plan for exhibit space. The enthusiastic response to this invitation indicates a large number of exhibitors for the meeting.

The following list of scientific speakers, although not complete, will show the type of speakers to whom members of the Kansas Medical Society will be privileged to listen:

INTERNAL MEDICINE

M. A. Blankenhorn, M.D., Director, Department of Internal Medicine, University of Cincinnati School of Medicine, Cincinnati, Ohio.

Alvin F. Coburn, M.D., Department of Medicine, Northwestern University, Chicago, Illinois.

Alexander Marble, M.D., Instructor in Medicine, Harvard Medical School, Boston, Massachusetts.

Sloan J. Wilson, M.D., Assistant Professor of Medicine, University of Kansas School of Medicine, Kansas City, Kansas.

SURGERY

Thomas Burford, M.D., Department of Surgery, Washington University, St. Louis, Missouri. Specialty: Thoracic Surgery.

OBSTETRICS AND GYNECOLOGY

Lester O'Dell, M.D., Department of Obstetrics, Chicago Lying-In Hospital, Chicago, Illinois.

PSYCHIATRY

Karl Menninger, M.D., Manager, Winter Veterans Administration Hospital, Topeka, Kansas; Director, Department of Education, Menninger Foundation, Topeka, Kansas.

NEOPLASTIC DISEASES

George Pack, M.D., Director, Pack Medical Group, New York, New York.

ORTHOPEDICS

James B. Weaver, M.D., Professor of Orthopedic Surgery, University of Kansas School of Medicine, Kansas City, Kansas.

EENT

Louis J. Birsner, M.D., Washington University, St. Louis, Missouri. Specialty: Otolaryngology.

S. J. Meyer, M.D., Attending Physician at Several Chicago Hospitals, Chicago, Illinois. Specialty: Ophthalmology.

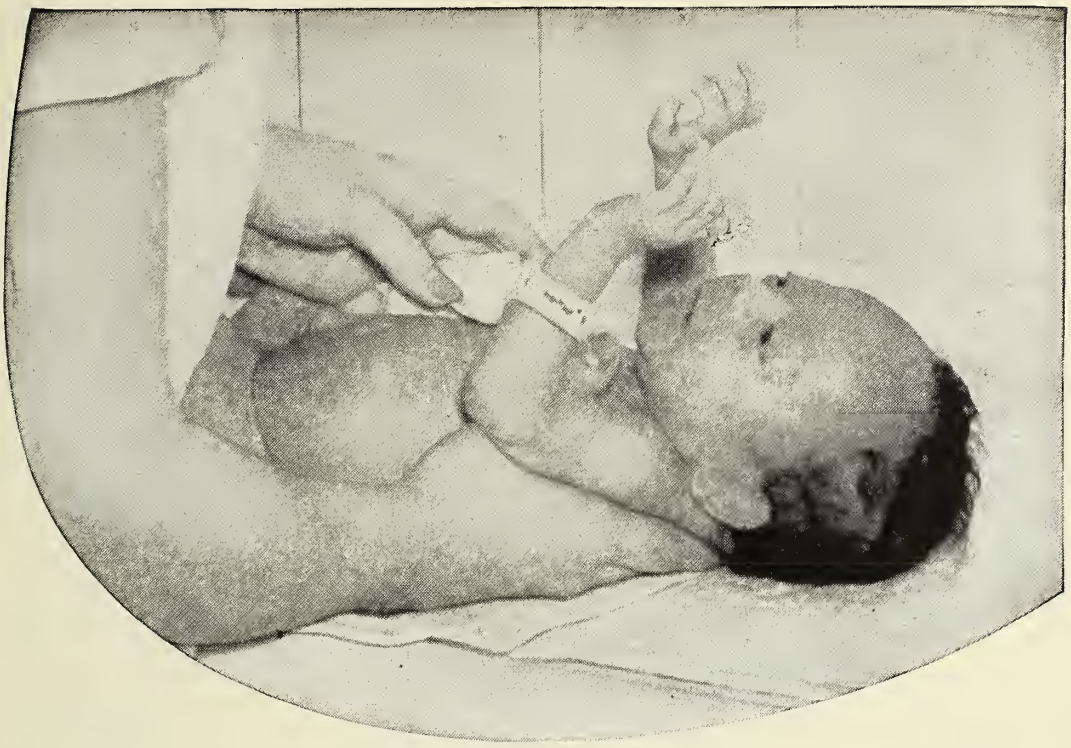
Dr. George F. Lull to Address Annual Meeting

The Kansas Medical Society is specially honored this year by having as its guest for the program on Wednesday, May 14, Dr. George F. Lull, secretary and general manager of the American Medical Association. An invitation to attend the Kansas meeting was extended to Dr. Lull shortly after he took over his duties with the A.M.A. and he agreed to be present if his schedule would permit. In recent letters Dr. Lull has confirmed his acceptance of the invitation and has indicated that his address will concern activities at national headquarters.

Hotel Reservations

Members of the Kansas Medical Society should make reservations now for hotel rooms during the time of the annual meeting, May 12-15, 1947. Topeka hotels have promised to cooperate in every way to provide housing for all who wish to attend, but the best accommodations will be reserved for those who make arrangements early. Some members have already done so. The largest hotels in Topeka are the Jayhawk, the Kansan and the Capitol, and the names of smaller hotels will be sent on request.

Make your reservations now.



Premature, but promising

To the premature struggling for existence, intestinal distention, colic or diarrhea may be insurmountable obstacles. Good care and good nutrition, however, offer promising prospects for life and health.

In the feeding of premature infants, 'Dexin' has proved an excellent "first carbohydrate." Because of its high dextrin content, it (1) resists fermentation by the usual intestinal organisms, (2) tends to hold gas formation, distention and diarrhea to a minimum, and (3) promotes the formation of soft, flocculent, easily digested curds.

Readily soluble in hot or cold milk, or other bland fluids, 'Dexin' brand High Dextrin Carbohydrate is well taken and retained. 'Dexin' *does* make a difference.

'Dexin' HIGH DEXTRIN CARBOHYDRATE
BRAND

Composition—Dextrins 75% • Maltose 24% • Mineral Ash 0.25% • Moisture 0.75% • Available carbohydrate 99% • 115 calories per ounce • 6 level packed tablespoonfuls equal 1 ounce • Containers of twelve ounces and three pounds • Accepted by the Council on Foods and Nutrition, American Medical Association.
'Dexin' Reg. Trademark

Literature on request

BURROUGHS WELLCOME & CO. (U.S.A.) INC., 9 & 11 East 41st St., New York 17, N.Y.

STATE INSTITUTIONS

University of Kansas Hospitals

Last month's article on state institutions concerned mental patients, commitments to the three state mental hospitals, and conditions under which patients may be released. In this issue the Journal presents a short outline of the types of patients admitted to the University of Kansas hospitals so that physicians of the state will know the eligibility requirements. A study of this information will enable the doctor to make advance arrangements with the proper service at the hospitals, avoiding misunderstanding and delay.

The University of Kansas hospital is operated by the University of Kansas School of Medicine and is located at 39th and Rainbow Streets, Kansas City 3, Kansas. Like other institutions of its type, the University hospital can not admit all patients immediately, but will make every effort to render service when it is needed and to cooperate with the physicians of Kansas in securing early admission for their patients, regardless of financial status.

All patients admitted are classified in one of four groups: (1) Private and Semi-Private Patients, (2) Clinical Patients, (3) County Patients, (4) Free Teaching Patients.

Private and Semi-Private Patients. This classification covers a large portion of all patients admitted and includes those persons who accept responsibility for expenses incurred. Any Kansas physician who wishes to refer a patient of this type to the University hospitals may do so by contacting the staff doctor to whom the patient is being referred. The staff doctor will in turn make the necessary hospital arrangements to get the patient admitted at the earliest date possible.

Clinical Patients. Patients whose financial status will not allow payment of a professional fee, but who can assume responsibility for hospital charges, fall into this classification. They are expected to pay at least one week's room rent in advance. It is recommended that physicians refer such patients to the Out-Patient Clinic for examination before their admission to the hospital, but this is not always feasible and other arrangements may be made when emergencies arise. Some patients are admitted directly to the hospital when their private physicians make such arrangements with the hospital, either by correspondence or by telephone, indicating that the patient needs professional services for which he is unable to pay. Under those circumstances, arrangements for admission are made by the hospital and the doctor representing the patient.

County Patients. Cared for in this classification are the indigent, those who are personally responsible for no portion of their expenses. These patients are normally referred to the hospital through the county physician or the county welfare department, and their hospital charges are paid by the county in which they reside, at the same rate paid by clinical patients. If possible, authorization from the county should be sent to the Social Service Department of the University of Kansas hospitals prior to the time of the patient's admission, but exceptions to this rule are made at times of emergency and the hospital accepts the county authorization at the time of admission.

Free Teaching Patients. Patients completely without funds may be admitted to the hospital without payment of fee in a limited number of instances when the cases are of sufficient teaching value to warrant this service. Funds available for "free teaching" are very limited, however, and must be used sparingly within the amount allocated by the budget for each service. Physicians of Kansas may effect admission for patients of this type by making advance arrangements with the doctor in charge of the particular service on which the patient is to be admitted. Only cases of unusual teaching value are accepted in this category, and private physicians are urged to present complete information when making application for admission of this type of patient.

To facilitate admissions to the University hospitals, the names of the chiefs of the respective services are listed below, and inquiries concerning any patient may be directed to the head of the department in that specialty.

Medicine—Ralph Major, M.D.
Surgery—Thomas G. Orr, M.D.
Pediatrics—Herbert C. Miller, M.D.
Obstetrics and Gynecology—LeRoy A. Calkins, M.D.
Radiology—Galen M. Tice, M.D.
Nose and Throat—Sam Roberts, M.D.
Ophthalmology—John A. Billingsley, M.D.
Psychiatry—William Roth, M.D.
Dermatology—C. C. Dennie, M.D.
Physical Medicine—Gordon Martin, M.D.

Schering Announces Competition

The Schering Corporation, Bloomfield, New Jersey, has announced the subject for manuscripts for its 1947 competition among medical students, "The Clinical Use of Androgens in the Female." Cash prizes of $500, $300 and $200 will be awarded the three winners selected by a board of judges prominent in endocrinology. Manuscripts must be submitted on or before July 31, 1947.

Medical Assistants' Meeting

Members of the Shawnee County Medical Assistants' Society are now completing plans for the annual meeting at which they will be hostesses, May 11 and 12, at Topeka. Marjorie Euler, president of the state group, and Charlotte Ellis, president of the local group, announce that all committees have been organized and are functioning.

The program for the two days has not yet been set up, but a number of speakers have accepted invitations to take part. Dr. Clyde O. Merideth, Jr., chairman of the Kansas Medical Society Committee on Medical Assistants, will discuss the personality of the ideal office assistant, repeating the address he gave at the joint meeting of doctors and assistants at Emporia, January 19. Dr. E. H. Gibbons, medical coordinator of the V.A. Medical Service Center, will outline the treatment of veterans under the agreement between the Kansas Medical Society and the Veterans Administration and will explain the importance of filing the necessary papers with the V.A. office. Other addresses will be given by Dr. Ruth Barnard of the Menninger Foundation and Mr. Oliver E. Ebel, executive secretary of the Kansas Medical Society.

Social events will not be neglected during the meeting. A buffet supper will be served Sunday evening, there will be an installation luncheon Monday, and other entertainment will be provided. Time will be allowed for an "Information Please" question and answer forum and for a tour of Winter Veterans Administration hospital.

The complete program will be printed in the medical assistants' quarterly bulletin, to be issued next month, and in the program issue of the Journal of the Kansas Medical Society.



Three points . . . PLUS

"Premarin" . . . orally active
"Premarin" . . . relatively free from side reactions
"Premarin" . . . highly potent

To these advantages may be added the emotional uplift or feeling of well-being which is so often encountered in the patient following therapy with "Premarin." This aspect is being favorably commented upon by an increasing number of clinicians.

To permit flexibility of dosage and enable the physician to fit estrogenic therapy to the particular needs of the patient, "Premarin" is supplied in two potencies:

Tablets of 1.25 mg.—bottles of 20, 100 and 1000.
Tablets of 0.625 mg.—bottles of 100 and 1000.
Liquid, containing 0.625 mg. in each 4 cc.
(one teaspoonful)—bottles of 120 cc.

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

CONJUGATED ESTROGENS
(equine)

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"Premarin"

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VETERANS ADMINISTRATION AGREEMENT

Treatment of Malaria

Editor's Note. Although the treatment of malaria by fee designated physicians was discussed in a former issue of the Journal (September, 1946), new information has been received from the Chief Medical Officer of the Veterans Administration with the request that it be transmitted to physicians treating veterans under the terms of the present agreement. In order that treatment be standardized in accord with modern medical concepts of malaria, the information is quoted below.

"Information from the field leads to the conclusion that it is not uncommon practice for physicians to diagnose and treat malaria on clinical symptoms alone without confirmation of the diagnosis by examination of blood smears. This practice is not in accord with acceptable standards.

"By the use of thick blood smear technique, the malarial organism can usually be demonstrated in the patient during symptomatic relapse. Failure to demonstrate the organism by careful repeated examination of properly prepared blood smears throws grave doubt upon a malarial etiology or the patient's symptoms.

"Following examination of blood smears the management of the case should be as follows:

(1) If the blood smear is positive, a full course of Quinacrine (Atabrine) or Chloroquine (Aralen) should be administered.

(2) If the veteran has had four or more relapses due to malaria he should be admitted to a veterans hospital for a course of Panaquine-Quinine treatment unless there are contraindications.

(3) If the veteran's symptoms require treatment but the blood smear is negative for malaria, he should be admitted to a veterans hospital for diagnostic study, where, if repeated blood smears continue to be negative, careful study may be expected to result in a correct diagnosis of his ailment and efficient treatment thereof. Diagnosis of malaria by therapeutic trial is never a justifiable procedure.

"In a few words, the management of the case may be summarized as follows: Blood smears should be examined on every case of suspected malaria. If smears are positive, give treatment for malaria. If smears are negative, hospitalize the veteran to determine the exact cause of his illness in order that proper treatment may be administered. This plan of medical care for malaria should be followed wherever possible.

"In order that men might be kept on duty, as a military measure, suppressive treatment was justifiable. In civilian life also suppressive treatment sometimes becomes desirable over a short period in order that a veteran may accomplish some urgent task. From a medical standpoint, however, there is no justification for suppressive treatment.

"Experience with many thousands of cases during the recent war conclusively demonstrated the superiority of Quinacrine (Atabrine) over Quinine, and the lower incidence of undesirable reactions attending its use. Experience since the war has demonstrated also the value of Chloroquine (Aralen).

"It is requested that every necessary channel be utilized to convey the above information to physicians who are prescribing treatment for veterans. It is essential that all physicians be reached who are concerned in the treatment of veterans, whether they are serving full-time, part-time, on a fee basis or are participating members in a state medical service program."

Microfilm Available to Civilians

The Army Medical Library, which supplied millions of pages of microfilmed medical articles to the armed services and research agencies during the war, announces that this service is now generally available to civilian physicians, institutions and research workers on a cost basis. This provides for direct access to the library's enormous resources of medical literature.

A fee of 50 cents is charged for filming any periodical article in a single volume, regardless of length. Microfilming from monographs is furnished at 50 cents for 50 pages or fraction thereof. Photostats are also available at a charge of 50 cents per 10 pages or fraction thereof. Material filmed is not for reproduction without permission of the copyright owner.

A coupon system has been established to eliminate confusion, and users may buy any quantity of photoduplication coupons at 50 cents each. Order blanks are available upon request. Checks should be made payable to the Treasurer of the United States, and sent to the Army Medical Library, 7th Street and Independence Avenue, S.W., Washington 25, D.C.

Course for Medical Librarians

To meet the shortage of trained medical record librarians a course has been designed by the Educational Board of the American Association of Medical Record Librarians to give in-service instruction in the field, made possible by a grant of $22,000 from the National Foundation of Infantile Paralysis. Administrators and those employed in hospital or clinic records are eligible to attend, and persons who have previously been so employed may take a refresher course.

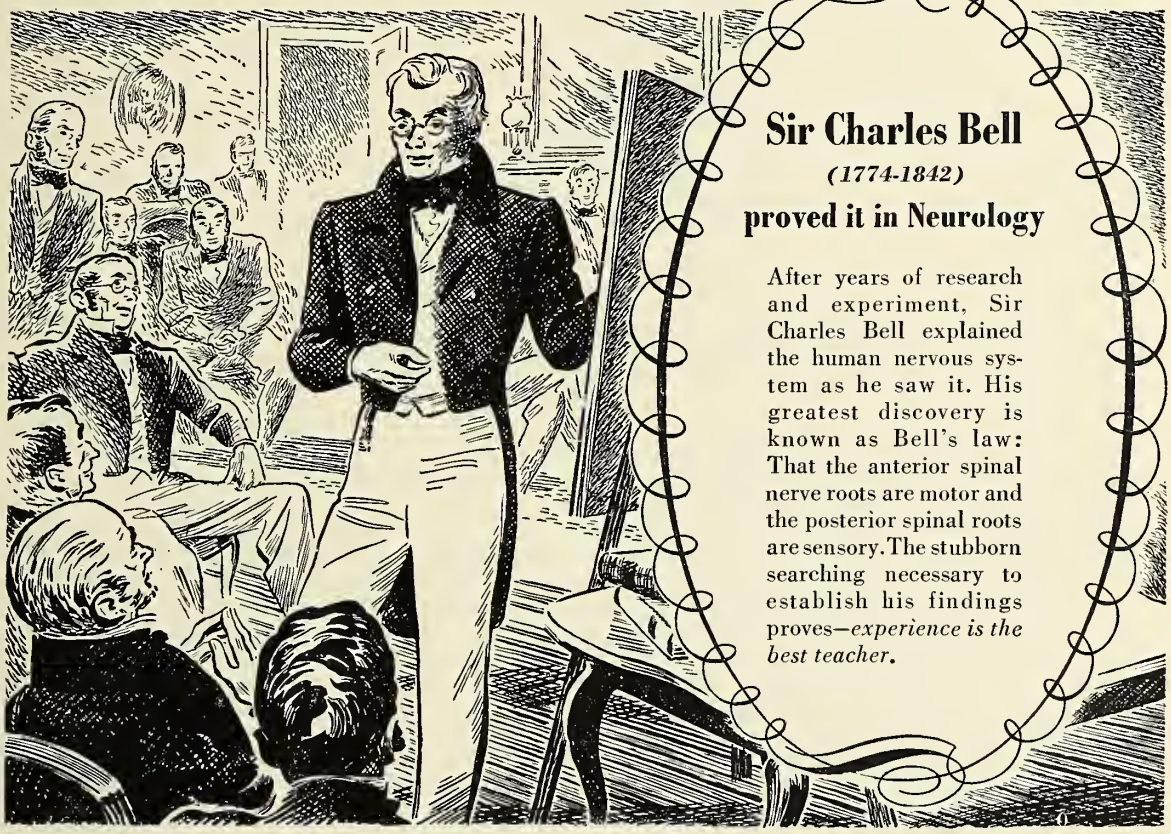
Since the grant is not sufficient to maintain the course beyond the present schedule of 25 classes, a tuition fee of $20 is charged. Each class will meet for five consecutive days and students will learn medical terminology, medical ethics, and how to use standard nomenclature of disease and of operations. In addition, there will be practice periods and lectures. A course will be offered at Omaha March 24-28 with Miss Margaret C. Taylor, Rochester General Hospital, Rochester, New York, as director.

UNRRA Health Division Closes

The UNRRA Health Division, after three years work, will wind up its activities on March 31, 1947, and is now turning over various phases of its activity to the Interim Commission of the World Health Organization. Pending full establishment of the World Health Organization, the commission will operate with one and a half million dollars transferred from UNRRA.

During its three years of operation the UNRRA Division has assisted and advised health departments of 13 liberated countries and has given medical and sanitation services to more than a million men, women and children in the camps for displaced persons in the Middle East, Germany, Austria and Italy. Dr. Wilbur A. Sawyer, director of the division, feels that the results of the work have exceeded all expectations since Europe has gone through the first year and a half after the war with no major epidemics.

Experience is the Best Teacher



Sir Charles Bell

(1774-1842)

proved it in Neurology

After years of research and experiment, Sir Charles Bell explained the human nervous system as he saw it. His greatest discovery is known as Bell's law: That the anterior spinal nerve roots are motor and the posterior spinal roots are sensory. The stubborn searching necessary to establish his findings proves—*experience is the best teacher.*

Yes, and experience is the best teacher in smoking too!

The wartime cigarette shortage is only a memory now, but that's when millions of people—smoking any brand they could get—learned the differences in cigarette quality.

And, significantly, more people are smoking Camels than ever before in history. But, no matter how great the demand:

Camel quality is not to be tampered with. Only choice tobaccos, properly aged, and blended in the time-honored Camel way, are used in Camels.





According to a recent Nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

COUNTY SOCIETIES

The Riley County Medical Society met January 23 at the Gillett Hotel, Manhattan. Mr. Stuart Campbell, enrollment director for Kansas Physicians' Service, discussed plans for K.P.S. enrollment in Manhattan.

* * *

Members of the Saline County Society were hosts to the Golden Belt Medical Society at a meeting held at the Lamer Hotel, Salina, February 6. A scientific program was given in the afternoon and the following papers were presented: "Neuropsychiatric Aspect of Everyday Practice," Dr. L. W. Hatton, Salina; "Clamp Method of Hysterectomy," Dr. M. W. Hall, Wichita; "Dermatologic Problems of General Interest," Dr. J. P. Berger, Wichita. Dinner was served at 7 o'clock, after which there was an informal program.

* * *

The regular meeting of the Clay County Society was held January 8 with Dr. Dwight Lawson and Dr. J. L. Lattimore, Topeka, as guests. Dr. Lawson presented a paper on "Subacute Bacterial Endocarditis," and a general discussion followed.

* * *

A meeting of the Douglas County Society was held February 11 at Lawrence Memorial hospital. Mr. Stuart Campbell, Topeka, enrollment director for Kansas Physicians' Service, discussed plans for an enrollment campaign in Lawrence.

* * *

The Johnson County Society has announced plans for an essay contest for junior and senior students in the high schools of the county, with prizes of $50 and $25 for the winners of first and second places. The subject of the essays is to be, "Why the private practice of medicine furnishes this country with the finest medical care." The essays judged best in Johnson county will be submitted in state and national contests.

* * *

Members of the Wilson County Society entertained their wives at a dinner meeting at Fredonia February 12. A business meeting was held, after which Mr. Lloyd Bliss, county welfare director, spoke on "The Details in the Care of Pensioners and Indigent."

* * *

Eighteen members of the Butler County Society were present at a meeting at the El Dorado hotel on February 10. Dr. G. L. Norris, Winfield, presented a paper on hypertension.

* * *

The Cowley County Society met at the county health department offices in Winfield on February 20. Dr. Paul Ensign, director of the Division of Maternal and Child Health of the Kansas State Board of Health, discussed child health guidance and showed a film on well child clinics. Twenty members were present.

* * *

A regular meeting of the Clay County Society was held February 12 with a business session preceding the scientific program. A committee composed of Doctors F. C. Shepard, W. R. Morton and S. A. Anderson was appointed to study an alternate county contract presented at the meeting. Dr. John M. Porter, Concordia, presented a series of 100 cardiac cases of different types, angina, auricular fibrillation, arteriosclerosis and rheumatic heart disease.

* * *

The Franklin County Medical Society, at its meeting at Ransom Memorial hospital, Ottawa, February 17, voted unanimously to sponsor a membership campaign in Ottawa for Kansas Physicians' Service. Mr. Stuart Campbell, enrollment director of K.P.S., explained the operation of the campaign.

MEMBERS

Dr. A. K. Owen, radiologist who has been practicing in Topeka for 34 years, announced his retirement last month. During the past 28 years Dr. Owen has been practicing with Dr. Guy Finney.

* * *

Dr. Victor C. Eddy, Colby, has been named coroner of Thomas county.

* * *

Dr. William R. Brenner, who began practice in Larned last fall in association with Dr. C. E. Sheppard, was recently named Pawnee county health officer.

* * *

Dr. H. R. Turner, who has been practicing in Hope for more than 27 years, was honored by the city at a celebration marking his 70th birthday.

* * *

Dr. J. W. Randell and Dr. O. G. Hutchison, Marysville, announce that Dr. Robert M. Thomas, formerly of Waterville, is now associated in practice with them at the Randell clinic and hospital.

* * *

Dr. John M. Porter, Concordia, has been appointed health officer of Cloud county by the county commissioners.

* * *

Dr. Paul H. Lorhan, Mission, was named to serve as representative of the Wyandotte County Medical Society on a recently organized council for the coordination of medical, hospital and nursing services for the greater Kansas City area.

* * *

Dr. C. K. Schaeffer, Topeka, has been named to the board of directors of the Kansas Children's Home and Service League.

* * *

Dr. L. N. Speer, Ottawa, was appointed Franklin county health officer for a term beginning March 1.

Study of Physician Numbers

A study of the number of practicing physicians in the United States is currently under way by Medical Mailing Service, Inc., and a recent press release indicates that the list is continuing to grow larger, a trend that has existed since the armed forces began releasing physicians from active duty. During the period from September 15 through December 30, 1946, there was a total increase of 16,030 civilian physicians, 1805 new names and 14,225 whose military duty was terminated. During that same period 1,153 deaths were reported in the profession, leaving a net increase of 14,877 names.

The figures presented for Kansas show 1,557 physicians, as of January, 1947, with 928 in general practice. Of the total number 1,275 are under 69 years of age, and 736 of those in that age group are engaged in general practice.



to combat

depression characterized by

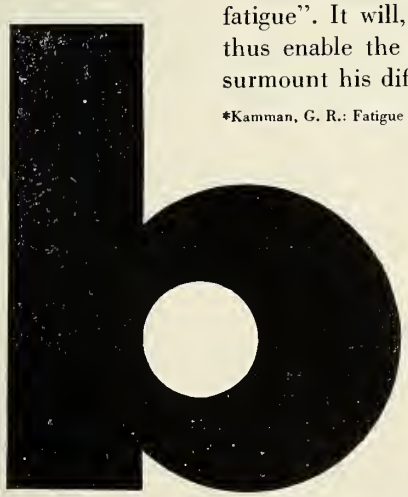
"chronic fatigue"

Depressed patients ". . . suffering from psychomotor inhibition complain of feeling tired, of not being able to get started on their daily tasks, and of an abnormal inclination to procrastinate. They make up their minds that they are going to do a certain thing but they never seem to get to it. Everything seems too big for them . . ."*

In the above quotation, Kamman emphasizes "chronic fatigue" as a dominant symptom in the type of depression most frequently encountered in daily practice.

Benzedrine Sulfate is particularly valuable in the presence of "chronic fatigue". It will, in most cases, help to overcome the depression and thus enable the patient to make a sincere and constructive effort to surmount his difficulties.

*Kamman, G. R.: Fatigue as a Symptom in Depressed Patients, Journal-Lancet 65:238 (July) 1945.



Tablets and Elixir

benzedrine sulfate

(*racemic amphetamine sulfate, S.K.F.*)

Smith, Kline & French Laboratories, *Philadelphia, Pa.*

Proposed Amendments to By-Laws

The members of the Kansas Medical Society Committee on Constitution and Rules have agreed by correspondence to present three amendments to the By-Laws to the House of Delegates at its meeting in May. The proposed amendments are printed below to give delegates an opportunity to study them before the time of the meeting, and will be printed a second time in the April issue of the Journal.

1. By-Laws, Chapter X—Editorial Board—Section 7

The section now reads—"Funds of the Journal and other publications shall be accounted in separate ledgers, and shall preferably be maintained in separate banking institutions. Bills for expenditures authorized by the Editorial Board and approved by the chairman of the Board shall be paid by vouchers signed by the Treasurer and countersigned by the President and Secretary. Surplus funds may be accrued at the end of the fiscal year to reserve accounts within limits established by the House of Delegates or the Council."

This section shall be amended to read: "Funds of the Journal, and other publications shall be accounted in separate ledgers, and shall preferably be maintained in separate banking institutions. Bills for expenditures authorized by the Editorial Board and approved by the chairman of the Board shall be paid by vouchers signed by the Chairman of the Board and countersigned by either the managing editor or the business manager of the Journal of the Kansas Medical Society. The Chairman of the Board, the managing editor and the business manager shall be individually bonded for sums not less than $5,000.00. Certification of all vouchers written shall be mailed not less frequently than once each month to the president, the secretary and the treasurer of the Kansas Medical Society. Surplus funds may be accrued at the end of the fiscal year to reserve accounts within limits established by the House of Delegates or the Council."

2. By-Laws, Chapter V.—House of Delegates—Section 1

The section now reads: "The House of Delegates shall meet on the first and last days of each annual session. It may adjourn from time to time as may be necessary to complete its business; *Provided* that its hours shall conflict as little as possible with the general or sectional meetings." The section shall be amended to read: "The House of Delegates shall have two distinct meetings during each annual session, either of which may be adjourned from time to time as may be necessary for the completion of its business. The time and place for each shall be determined by the Committee on Arrangements at such hours as to conflict as little as possible with the general or scientific meetings.

"Special or intermediate meetings may be called at the discretion of the Council. Notice of such meeting shall be mailed to each component society at least thirty days in advance of the date selected. Delegates shall be selected by the component societies in the manner provided for annual sessions."

3. By-Laws, Chapter V—House of Delegates—Section 17

The original section was amended by the House of Delegates, May 11, 1944 and now reads: "Representatives to the House of Delegates of the American Medical Association shall be certified to each annual meeting of that body according to the Constitution and By-Laws of that association, and shall be selected in the following manner: One-half the number of delegates permitted this society for two year terms of office shall be selected annually as Delegates-Elect, whose terms of office shall begin with the annual session of the American Medical Association of the year succeeding their election."

The section shall be amended by the addition of the following clause:

"No member may be elected to serve more than three consecutive two year terms as delegate to the American Medical Association."

Improved Artificial Hand

A new artificial hand which represents a major advance in the manufacture of prostheses for amputees was announced recently by Major General Norman T. Kirk, Surgeon General of the Army. The new device is not now on the market but will be available as soon as civilian industry gets it into production.

The "hook" hand is now regarded as the best that can be provided, but the new design combines the utility of the hook with the appearance of a true hand. It is a plastic glove simulating a natural hand even to finger prints, skin structure and hair. It is seamless, flexible, light weight, waterproof, and less inflammable than clothing. The Army laboratory which developed the plastic material perfected a glove of great resistance to the deteriorating effects of the atmosphere and chemical reagents encountered by a hand in normal use.

This hand is designed to impart all of the force from the controlling means into the first and second fingers, which meet conjointly with the thumb. A force amplifier is built into the hand, which transmutes the initial impulse and compensates for mechanical losses, thus giving the amputee a greater grip at the fingertips for each one-pound of force exerted on the control cable than he has ever had with any other artificial hand.

Cosmetic hands now in use produce only about four pounds of grip for 15 pounds of pressure. This new hand gives about one pound of grip for one pound of pressure.

The third and fourth fingers of the hand would ordinarily add little to the value of a mechanical grasp, and are therefore designed only for prolonged strain in carrying a handled object, such as a suitcase. These fingers can also be used as a control lever for locking and unlocking the movable fingers.

Two miniature clutches of great strength, capable of releasing easily under full pressure, are used in the hand. One is used to pre-position the thumb, permitting a wide latitude in the size of the object grasped. The other is used when wanted to lock the fingers in a position or grip desired by the amputee to relieve strain on the controlling means.

The weight of the glove is between two and three ounces, and the completed hand will weigh approximately twelve ounces.

Industrial Health Meetings

A conclave of combined professional personnel in industrial health work over the nation will take place at the Hotel Statler, Buffalo, New York, April 26 through May 4, 1947. At that time annual meeitngs will be held by the following organizations: American Association of Industrial Physicians and Surgeons, American Conference of Governmental Industrial Hygienists, American Industrial Hygiene Association, American Association of Industrial Nurses, American Association of Industrial Dentists.

Details of the program may be secured from Dr. Edward C. Holmblad, managing director of the American Association of Industrial Physicians and Surgeons, 28 East Jackson Boulevard, Chicago 4, Illinois.

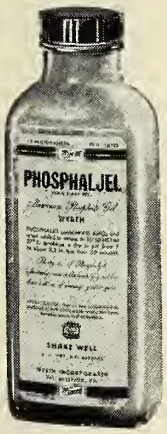
Peptic Ulcer

Stubborn cases call for PHOSPHALJEL

Phosphaljel is unexcelled in the treatment of marginal ulcer. It provides quick relief from pain . . . lays a protective coating over the inflamed mucosa . . . *safely* buffers gastric acidity with no danger of alkalosis or "acid rebound." Phosphaljel permits a liberal bland diet—patients are more contented during treatment, gain strength and weight more quickly.

Phosphaljel provides excellent prophylaxis against seasonal recurrences, as well as protection against marginal ulcer following surgery. It is highly valuable in cases complicated by diarrhea, pancreatic insufficiency or phosphorus deficiency, and is well adapted for continuous buffering by intragastric drip.

A new Wyeth motion picture, in full color, entitled "Intragastric Drip Therapy for Peptic Ulcer," illustrating the use and advantages of the intragastric drip apparatus is now available for showing before medical groups. Request a showing for your medical society. Address Professional Service Department.



PHOSPHALJEL®

ALUMINUM PHOSPHATE GEL

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

Wyeth®

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Questionnaire to Civilian Physicians

Following a series of questionnaires sent to physicians who served in the armed forces during World War II, the Committee on National Emergency Service of the American Medical Association is now sending out questionnaires to 5,000 physicians who remained in civilian practice during the war years. The names of those 5,000 physicians were selected at random, and those who received the questionnaires are urgently requested to supply the required information at the earliest possible date.

Although this figure represents a very small percentage of the total number in civilian practice, the committee feels that sufficient information can be obtained to be used as a basis for recommendations to the House of Delegates next June. The replies will give an over-all picture of the type of medical care available to civilians during the war, and will indicate what changes should be made in the mobilization of medical service in future emergencies.

The purpose of the committee, as outlined by the House of Delegates at its December meeting, is to ascertain the medical needs of our population, both military and civilian, during the time of a national emergency so that the profession will be prepared with facts and recommendations if the need for such information should arise in the future.

It is not too early to make hotel reservations in Topeka for the annual meeting of the Kansas Medical Society, May 12-15, 1947. Write the hotel of your choice today.

DEATH NOTICES

JAMES D. REID, M.D.

Dr. James D. Reid, 65, a member of the Franklin County Medical Society, died at his home at Wellsville January 27, after an illness of several months. He was graduated from the law school at the University of Missouri in 1904 and practiced that profession for four years before enrolling at the University Medical College of Kansas City. After his graduation in 1912 he practiced for two years at LeLoup. In 1914 he moved to Wellsville to practice in partnership with his brother, Dr. T. W. Reid, who now lives in Gardner.

* * *

CHARLES SAMUEL CAMPBELL, M.D.

Dr. Charles S. Campbell, 68, a Coffeyville physician and surgeon for more than 40 years, died February 8 following a heart attack. A graduate of Rush Medical College, Chicago, in 1902, Dr. Campbell returned to Kansas and began practice in Coffeyville. In addition to local medical society affiliations, he was a member of the American College of Surgeons and served as district counselor for the organization. He was instrumental in establishing the Southwestern Kansas hospital and was serving as its vice president at the time of his death.

* * *

ELLIOTT TATE HECKART, M.D.

Dr. E. T. Heckart, 64, a member of the Shawnee County Medical Society, died February 13 at a Topeka hospital. A graduate of the Kansas Medical College in 1908, Dr. Heckart received his Kansas license in 1909 and practiced in Carbondale for many years before opening his office in Topeka four years ago.

* * *

HERBERT RENNER GOSHORN, M.D.

Dr. Herbert R. Goshorn, 70, a member of the Osborne County Medical Society, died at Chanute February 11. He was graduated from the University Medical College of Kansas City in 1906 and had practiced in Kansas since that time, having had offices in Humboldt, Alton and Chanute.

* * *

JAMES MILTON MOORE, M.D.

Dr. James M. Moore, 77, a member of the Johnson County Medical Society, died at Kansas City on February 6. He was graduated from the College of Physicians and Surgeons, Kansas City, in 1900, and began practice in Kansas in 1901. During the past ten years he had practiced in Spring Hill, and before that had practiced in Wellsville.

* * *

WILLIAM SHARP LINDSAY, M.D.

Dr. William S. Lindsay, 94, a prominent member of the medical profession in Kansas, who served as president of the Kansas Medical Society for the 1918-1919 term, died at his home in Topeka February 20. He had retired from active practice eight years ago.

Dr. Lindsay was graduated from the College of Physicians and Surgeons of Keokuk, Iowa, in 1874 and for several years practiced in Garnett in partnership with his father, the late Dr. Thomas Lindsay. In 1879 he became associated with the Topeka State Hospital, serving as superintendent for six years, and in 1900 he opened an office for private practice, specializing in the treatment of nervous diseases. He was one of the founders of the Kansas Medical College established in Topeka in 1889, now located in Kansas City as a part of the University of Kansas Hospitals, and at one time he served as president of the Topeka Academy of Medicine and Surgery, an organization that was active in Topeka before the formation of the Shawnee County Medical Society in 1901.

* * *

WILLIAM S. GOOCH, M.D.

Dr. William S. Gooch, 72, a member of the Bourbon County Medical Society, died at Fort Scott on February 21 after suffering a heart attack. He had practiced in Fort Scott for many years and at the time of his death was serving as county health officer. He was a graduate of the Beaumont Hospital Medical College, St. Louis, Missouri, with the class of 1900.

* * *

LEWIS MILWARD SCHRADER, M.D.

Dr. Lewis M. Schrader, 67, who had practiced in Kinsley 41 years, died February 18 after a short illness. A graduate of the University of Louisville (Kentucky) School of Medicine in 1905, Dr. Schrader opened his office in Kinsley that same year, continuing his practice there except for an interval during World War I when he served in the Army. He was particularly interested in opthalmology, but did not confine his practice to that specialty.



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BOOK REVIEWS

Hygiene. 4th Edition. By Florence L. Meredith, B.Sc., M.D. Published by the Blakiston Company, Philadelphia. 838 pages, 155 illustrations. Price $4.00.

The title of this book might more appropriately be called "Bodily Hygiene" because over 90 per cent of the material covers only this aspect of the problem. There are 782 pages in the text proper, of which 690 pages are devoted to a rather comprehensive accounting of organic public health statistics and problems, general elementary human physiology, a chapter on medical history, very adequate discussions on the most important infectious and degenerative diseases, an excellent section on accidents and poisonings, 22 short chapters on physical hygiene and physiology of the various systems of the body, and a section on the physiology of reproduction, including statistics on maternal and foetal deaths.

The remaining 68 pages represent a section entitled "Mental Health" of which a 22-page chapter deals very superficially with principles of mental hygiene. Not only are there pitifully few pages devoted to this most important and most neglected aspect of hygiene, but the artificial division of emotional from organic hygiene belies the either-or attitude (either organic or functional).

An excellent book on bodily hygiene.—*D. R. Bedford, M. D.*

Campaign Against Heart Diseases

A grant of $50,000 was recently made by the American Legion and its Auxiliary to the American Council on Rheumatic Fever in response to a nation-wide campaign against heart disease. Begun in 1946, the campaign moved slowly at first because of inadequate financial support but is now widening its scope of activities to include fundamental research and the ultimate application of new discoveries to the care of the individual patient.

American College of Chest Physicians

Examinations for fellowship in the American College of Chest Physicians will be given on June 5, the first day of the annual session of the college to be held at the Ambassador hotel, Atlantic City, June 5-8. Applicants for fellowship are asked to communicate at once with the executive secretary, 500 North Dearborn, Chicago 10, Illinois. A scientific program will be given throughout the four days, and a convocation will be held on June 8.

The Neurological Hospital, 2625 The Paseo, Kansas City, Missouri. Operated by the Robinson Clinic, for the care and treatment of nervous and mental patients and associated conditions.

Sugar in Pharmacy

A total of 63,000,000 pounds of sugar is used annually in the production of medicines and drugs, reports Dr. Paul S. Pittenger, vice president in charge of Quality Control of Sharp and Dohme, Inc., in a publication issued recently by the Sugar Research Foundation, "Sugars and Sugar Derivatives in Pharmacy."

According to the report, sugar, alcohol and glycerine are the essential basic ingredients in modern pharmacy. Surprisingly, sugar's sweetening power is not the principal reason for its use since it functions more often as a preservative, an antioxidant, a solvent, a demulcent, a coating and a stabilisen. It also finds wide use as a material to give consistency or body, and as a replacement for glycerine.

Tracing the history of sugar in medicine, Dr. Pittenger reports that it was used exclusively as a medicine before the 11th century, being employed as a laxative and diuretic, for relieving mucous congestion and for healing wounds. It was not until the time of Queen Elizabeth that it appeared as a luxury food on the tables of the nobility.

Copies of the report may be obtained from the Sugar Research Foundation, 52 Wall Street, New York 5, New York.

ANNOUNCEMENTS

March 17-20—Sixteenth Spring Clinical Conference, Dallas Southern Clinical Society, Hotel Adolphus, Dallas, Texas.

March 25-26—Meeting, Kansas State Board of Medical Registration and Examination, City-County Health Center, Kansas City, Kansas.

April 26-May 4—Conclave of Professional Personnel in Industrial Health Work, Hotel Statler, Buffalo, New York.

April 28-May 2—Annual Session, American College of Physicians, Chicago, Illinois.

MAY 12-15—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, TOPEKA, KANSAS.

June 5-8—13th Annual Meeting, American College of Chest Physicians, Ambassador Hotel, Atlantic City, New Jersey. Scientific program and examinations for fellowship.

June 9-13—Centennial Session, American Medical Association, Atlantic City, New Jersey.

CLASSIFIED ADVERTISEMENTS

CRUTCHES with tips, $2.25 pair postpaid. Braces made repaired, altered. Prompt service. BOSWORTH BRACE SHOP, 416 N. Water, Wichita, Kansas.

LABORATORY TECHNICIAN WANTED—For physician's office in Topeka. Good salary and hours. Write the Journal 5-47.

DOCTOR RETIRING—Desires to sell equipment and practice. Write the Journal 6-47.

FOR SALE—Spencer microscope, triple objectives, plain stage, bell jar. Good condition. $75. Write the Journal 1-47.

DOCTOR RETIRING—Desires to sell practice and office equipment. Good location. Population 5,500. Write the Journal 2-47.

LABORATORY POSITION WANTED—Experienced technician available March 15. Hospital work preferred. B.A. in biology, University of Oregon. Qualifications and complete information on request. Write the Journal 3-47.

THE JOURNAL
of the
KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLVIII APRIL, 1947 No. 4

Greetings

The Shawnee County Medical Society is proud to serve as host to the Kansas Medical Society at its 88th annual session, and we extend you a hearty welcome to Topeka, May 12-15, 1947.

We have not had the privilege of entertaining the Kansas Medical Society since 1944, and at that time our program was restricted to two days because of war conditions. Now that no restrictions exist, we have planned a full four-day meeting, complete with scientific sessions presented by outstanding guest speakers from all parts of the nation, scientific and commercial exhibits, sports tournaments and numerous social events. We want you all to enjoy the 1947 annual meeting.

Visitors at the annual session are cordially invited to avail themselves of the facilities of the Shawnee County Medical Society offices at 300 West Eighth street. Please feel free to use the Society library, telephone service, and writing rooms. Call upon us if any of the members or employees of the Society can be of service to you.

Members of the Shawnee County Medical Society have worked diligently for several months preparing for this session, and without such cooperation and support a program of this type could not have been arranged. To the chairmen and members of all committees, and to all who have helped in many different ways, I wish to express my thanks.

The entire membership of the Shawnee County Medical Society joins me in extending this word of greeting and in the hope that you will all derive much benefit and pleasure from this 88th annual session.

RALPH W. EMERSON, M.D.
President, Shawnee County Medical Society.

Guest Speakers

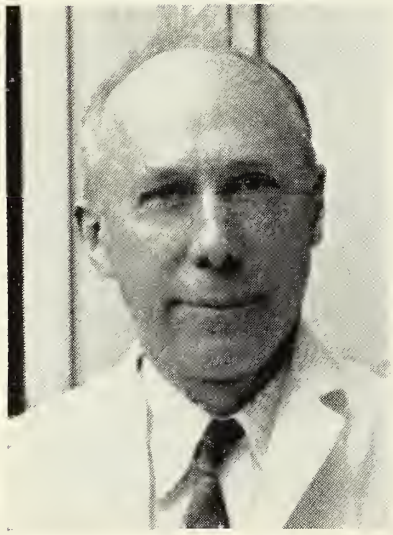


LOUIS JOSEPH BIRSNER, M.D.

St. Louis, Missouri

Graduate, St. Louis University, 1915; Staff of De Paul Hospital; Associate Otolaryngologist, St. Mary's Group of Hospitals; Fellow, American Academy of Ophthalmology and Otolaryngology; Fellow, American College of Surgeons; Military Service in World War I and World War II.

Specialty: Ear, Nose and Throat.

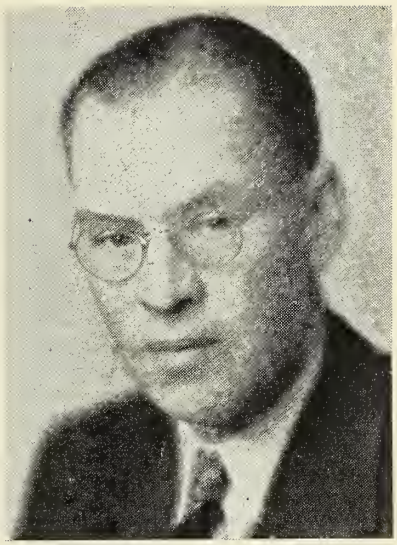


MARION ARTHUR BLANKENHORN, M.D.

Cincinnati, Ohio

Graduate, Western Reserve University School of Medicine, 1914; Professor of Medicine, University of Cincinnati College of Medicine; Director of Medical Service, Cincinnati General Hospital; Consultant in Internal Medicine, Veterans Administration Hospital, Dayton, Ohio; Diplomate, American Board of Internal Medicine; Governor for Ohio, American College of Physicians; Member, Scientific Advisory Board, Gould Research Foundation; Medical Consultant, Fifth Corps Area, A.E.F., World War I.

Specialty: Internal Medicine.



PHILIP WALLING BROWN, M.D.

Rochester, Minnesota

Graduate, University of Pennsylvania, 1920; Consultant in Medicine, Mayo Clinic; Associate Professor of Medicine, Postgraduate School of Medicine, Mayo Foundation, University of Minnesota; Fellow, American College of Physicians; Chief of Medical Service of 247th General Hospital during World War II.

Specialty: Gastro-enterology.

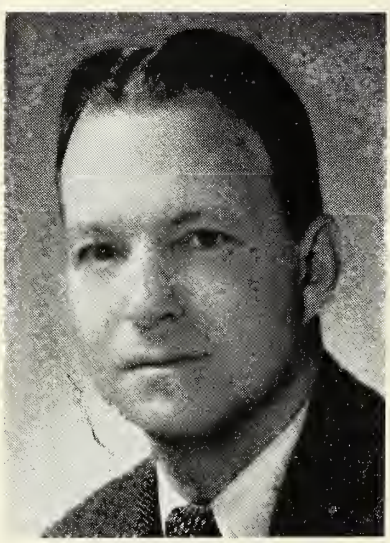


THOMAS HANNAHAN BURFORD, M.D.

St. Louis, Missouri

Graduate, Yale University School of Medicine, 1936; Associate Professor of Surgery, Washington University School of Medicine; Assistant Surgeon, Barnes Hospital and St. Louis Children's Hospital; Attending Consultant Surgeon in Thoracic Surgery, Robert Koch Tuberculosis Hospital, St. Louis City Hospital and Homer Phillips Hospital; Regional Consultant in Thoracic Surgery, Veterans Administration Branch No. 9; Diplomate, American Board of Surgery; Fellow, American College of Surgeons; Member, American Association for Thoracic Surgery; Military Service in World War II.

Specialty: Thoracic Surgery.



ALVIN FREDERICK COBURN, M.D.

Chicago, Illinois

Graduate, Johns Hopkins University School of Medicine, 1925; Research Associate, Northwestern University School of Medicine; Service in United States Naval Reserve during World War II.

Specialty: Rheumatic Fever.



EDWARD STARR JUDD, JR., M.D.

Rochester, Minnesota

Graduate, Rush Medical College, 1936; Permanent Staff of Mayo Clinic; Surgical Staff, St. Mary's Hospital, Rochester; Associate Professor, Mayo Foundation Graduate School, University of Minnesota; Diplomate, American Board of Surgery; Military Service in Army during World War II.

Specialty: General Surgery.

HENRY HOWARD KESSLER, M.D.

Newark, New Jersey

Graduate, Cornell University Medical College, 1919; Attending Orthopedic Surgeon, Hospital and Home for Crippled Children, Newark City Hospital, Beth Israel Hospital, Hasbrouck Heights Hospital; Diplomate, American Board of Orthopedic Surgery; Fellow, American Academy of Orthopedic Surgeons; Fellow, American College of Surgeons; Member, Council on Industrial Health, American Medical Association; Fellow, American Public Health Association; Military Service in Navy in World War I and World War II.

Specialty: Orthopedic Surgery.



GEORGE F. LULL, M.D.

Chicago, Illinois

Graduate, Jefferson Medical College, 1909; Secretary and General Manager of American Medical Association; Fellow, American College of Physicians; Fellow, American College of Surgeons; Served in Army Medical Corps from 1912 to 1946; Major General in World War II.

Specialty: Preventive Medicine.





ALEXANDER MARBLE, M.D.

Boston, Massachusetts

Graduate, Harvard Medical School, 1927; Instructor in Medicine, Harvard Medical School; Physician, New England Deaconess Hospital, Boston; Chief, Section of General Medicine, Veterans Administration Branch No. 1; Diplomate, American Board of Internal Medicine; Fellow, American College of Physicians; Military Service in Army during World War II.

Specialty: Internal Medicine.



HILBERT MARK, M.D.

Minneapolis, Minnesota

Graduate, University of Minnesota, 1930; Acting Director, Division of Tuberculosis, Minnesota Department of Health; Member, Tuberculosis Committee, Minnesota Medical Society; Member, Minnesota Trudeau Society; Assistant Professor, Military Science and Tactics, University of Minnesota; Master Public Health; Service as Army Public Health Officer during World War II; Now on Active Duty Status, Terminating August, 1947.

Specialty: Tuberculosis, Public Health.

KARL AUGUSTUS MENNINGER, M.D.

Topeka, Kansas

Graduate, Harvard Medical School, 1917; Manager, Winter Veterans Administration Hospital; General Director, Department of Education, Menninger Clinic; Trustee, Devereux Foundation; Director, National Committee for Mental Hygiene; Member Advisory Board, Health Services, American Red Cross; Consultant in Mental Health, Division of Mental Hygiene, U. S. Public Health Service; Consultant in Psychiatry to Surgeon General, United States Army.

Specialty: Psychiatry.



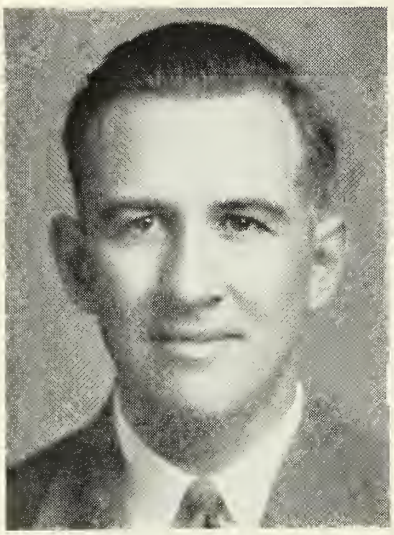
SAMUEL JAMES MEYER, M.D.

Chicago, Illinois

Graduate, Rush Medical College, 1923; Chairman, Eye Department and Attending Ophthalmologist, Michael Reese Hospital, Chicago; Attending Ophthalmologist, Illinois Eye and Ear Infirmary, University of Illinois; Diplomate, American Board of Ophthalmology; Fellow, American College of Surgeons; Military Service in Navy during World War I.

Specialty: Ophthalmology.



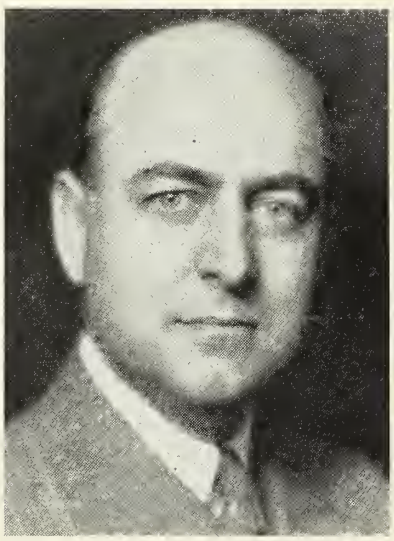


LESTER DAHLBERG O'DELL, M.D.

Chicago, Illinois

Graduate, University of Chicago, 1938; Instructor, University of Chicago; Associate Obstetrician and Gynecologist, Chicago Lying In Hospital; Diplomate, American Board of Obstetrics and Gynecology; Fellow, Chicago Gynecologic Society; Military Service in Navy during World War II.

Specialty: Obstetrics and Gynecology.



GEORGE THOMAS PACK, M.D.

New York, New York

Graduate, Yale University School of Medicine, 1922; Attending Surgeon, Memorial Hospital for Cancer, New York City; Clinical Professor of Surgery, New York Medical College.

Specialty: Diagnosis and Treatment of Cancer.

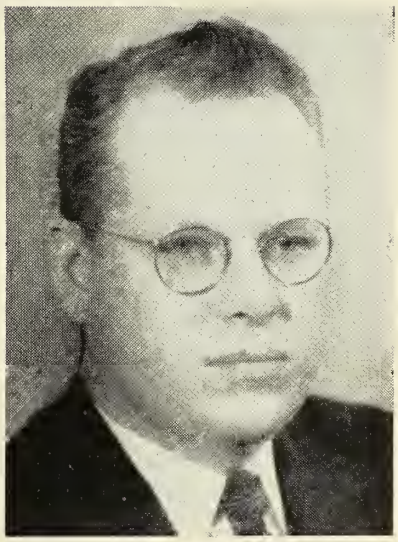


JAMES BRANSON WEAVER, M.D.

Kansas City, Kansas

Graduate, University of Kansas School of Medicine, 1925; Clinical Professor of Surgery, Head of Orthopedic Section, Department of Surgery, University of Kansas School of Medicine; Diplomate, American Board of Orthopedic Surgery; Military Service in Army during World War II.

Specialty: Orthopedics.



SLOAN JACOB WILSON, M.D.

Kansas City, Kansas

Graduate, University of Kansas School of Medicine, 1936; Assistant Professor of Medicine, University of Kansas School of Medicine; Associate, American College of Physicians; Member, Society Experimental Biology and Medicine; Military Service in Army during World War II.

Specialty: Internal Medicine (Hematology).

Schedule of Events

88TH ANNUAL SESSION

Topeka, May 12, 13, 14, 15, 1947

MONDAY MORNING, MAY 12

9:30 ANNUAL MEETING, BOARD OF DIRECTORS, KANSAS PHYSICIANS' SERVICE
Walnut Room, Kansan Hotel

10:00 PRACTICE ROUNDS, KANSAS MEDICAL GOLFING ASSOCIATION
Topeka Country Club, 27th and Buchanan Streets

10:00 PRACTICE SHOOTING, KANSAS MEDICAL SKEET AND TRAPSHOOTING ASSOCIATION
Topeka Gun Club, Six Miles East of Topeka on Highway 40, North Side of Highway

12:15 LUNCHEON, BOARD OF DIRECTORS, KANSAS PHYSICIANS' SERVICE
Walnut Room, Kansan Hotel

MONDAY AFTERNOON, MAY 12

1:00 COMPETITIVE GOLFING, KANSAS MEDICAL GOLFING ASSOCIATION
Topeka Country Club, 27th and Buchanan Streets

1:30 COMPETITIVE SHOOTING, KANSAS MEDICAL SKEET AND TRAPSHOOTING ASSOCIATION
Topeka Gun Club, Six Miles East of Topeka on Highway 40, North Side of Highway

7:00 TOURNAMENT BANQUET
Topeka Country Club, 27th and Buchanan Streets
Awarding of Prizes for Golf and Skeet Shoot
Election of Officers

TUESDAY MORNING, MAY 13

8:00 REGISTRATION
South Entrance, Municipal Auditorium
Open 8:00 A.M. to 5:30 P.M.
Opening of Scientific and Technical Exhibits

FIRST GENERAL SESSION
Assembly Room, Municipal Auditorium
Presiding: Dwight Lawson, M.D., Topeka, Kansas

9:20 ADDRESS OF WELCOME
Ralph W. Emerson, M.D., Topeka, Kansas

9:30 TREATMENT OF DIABETIC COMA
Alexander Marble, M.D., Boston, Massachusetts

Although the mortality from diabetic coma is now much less than formerly, deaths still occur all too frequently. Excepting those patients in whom there exists a complication fatal in itself, death is due usually either to delay in diagnosis or failure to give adequate dosage of insulin

TICKETS FOR ALL SPECIAL EVENTS AVAILABLE AT TIME OF REGISTRATION

TUESDAY MORNING, MAY 13, CONTINUED

early enough. In successful treatment the following principles must be observed: (1) prompt diagnosis and early institution of treatment, preferably in a hospital where adequate laboratory facilities exist, including service during nights, Sundays and holidays; (2) the giving of large amounts of unmodified insulin early—within the first three hours of treatment; (3) the parenteral administration of physiologic solution of sodium chloride in adequate amounts in order to assist in restoring fluid and electrolytes; (4) gastric lavage to relieve distension; (5) the institution of oral feedings as soon as tolerated, often within the first six to eight hours of treatment. Alkalies are needless and, if given in large quantities, may be harmful. The use of glucose within the first six hours of treatment is likewise unnecessary and undesirable. Important factors in the prognosis of diabetic coma are: (1) the severity of the acidosis; (2) the duration and degree of unconsciousness before the institution of treatment; (3) the age of the patient; (4) the cardiovascular-renal status of the patient; (5) complicating conditions; and (6) the degree of abnormality of the laboratory findings. Since diabetic coma is both preventable and remediable, deaths are needless. It is imperative that each hospital feel its responsibility to lower its mortality from diabetic coma to as nearly zero as possible and to furnish prompt emergency service to patients and physicians in the surrounding area.

10:00 TUMORS OF INFANCY AND CHILDHOOD

George T. Pack, M.D., New York, New York

This paper will present a summary of recent advances in tumor surgery performed on infants and children. Included will be a critical evaluation of work that has been euphistically reported in the lay press.—*Editor.*

10:30 INTERMISSION

10:45 INDICATIONS AND CONTRAINDICATIONS FOR SPLENECTOMY IN HEMATOLOGIC DISEASES

Sloan J. Wilson, M.D., Kansas City, Kansas

The normal physiologic function of the spleen consists in part of phagocytosis of old or damaged erythrocytes, granulocytes and blood platelets. In health there is a well balanced reciprocal relationship between splenic function and bone marrow hematopoiesis. When splenic dysfunctions develop this relationship is disturbed, the phogocytic action is overemphasized, and definite clinical syndromes become evident, such as thrombocytopenic purpura, hemolytic anemia, granulocytopenia and panhematopenia (simulating apalstic anemia). In these diseases splenectomy is indicated. Accurate diagnosis is of the utmost importance as other hematologic dyscrasias are similar to those in which splenectomy is curative or beneficial. Splenectomy is contra-indicated in those diseases in which there is no evidence of hypersplenism either of the primary or secondary type. The spleen is not an essential organ and is not necessary for maintenance of health.

11:15 PANEL DISCUSSION OF ALL PAPERS

12:15 ROUND TABLE LUNCHEONS

Cancer—Walnut Room, Kansan Hotel

Guest Speaker: George T. Pack, M.D., New York, New York
Presiding: Howard E. Snyder, M.D., Winfield, Kansas

Internal Medicine—Roof Garden, Kansan Hotel

Guest Speakers: Alexander Marble, M.D., Boston, Massachusetts
Sloan J. Wilson, M.D., Kansas City, Kansas
Presiding: Ralph G. Ball, M.D., Manhattan, Kansas

EENT—Green Rooms, Mezzanine Floor, Jayhawk Hotel

Guest Speakers: Louis J. Birsner, M.D., St. Louis, Missouri
Samuel J. Meyer, M.D., Chicago, Illinois
Presiding: Ralph E. Cheney, M.D., Salina, Kansas

TUESDAY AFTERNOON, MAY 13

SECOND GENERAL SESSION

Assembly Room, Municipal Auditorium

Presiding: O. W. Davidson, M.D., Kansas City, Kansas

2:00 PRESIDENT'S ADDRESS

W. M. Mills, M.D., Topeka, Kansas

2:20 THE YEAR AHEAD

Laurence S. Nelson, M.D., Salina, Kansas

2:30 EXTENSION OF RADICAL SURGERY AND THE TREATMENT OF CARCINOMA OF THE STOMACH

George T. Pack, M.D., New York, New York

This paper on radical surgery presented by one of America's foremost tumor surgeons will be of interest to every physician having occasion to care for patients with carcinoma of the stomach. Besides describing the details of surgical procedures involved, the paper will outline recommended procedures in making diagnoses and in after-care.—*Editor.*

3:00 DIABETIC NEUROPATHIES

Alexander Marble, M.D., Boston, Massachusetts

Neuropathies occurring in diabetes, presumably as a specific complication of the disease, include peripheral neuritis, neuropathic foot (simulating Charcot joint) and diabetic nocturnal diarrhea. Forms of diabetic neuritis other than those affecting the extremities are ocular paralyses and paralysis of the urinary bladder ("cordbladder"). Diabetic neuritis affects especially the peripheral nerves and is characterized by pain, paraesthesias, diminished or absent tendon reflexes and muscle weakness of varying degree. The lower extremities are most commonly involved. Pain and hyperesthesia, characteristically worse at night, may be extreme and prevent sleep. The striking, and often only, abnormality of the spinal fluid is an increase in its protein content. The pathogenesis of diabetic neuritis is obscure but clinical observation indicates that in nearly every case control of diabetes has been poor in the immediate or recent past. Treatment includes careful and continued control of the diabetic condition, the supplying of a diet adequate in all respects and the use of large amounts of vitamin supplements, particularly vitamin B, together with relative rest, physiotherapy, braces and supports if indicated, and palliative medication. Despite careful and energetic treatment, symptoms often persist for weeks, months or years so that the condition is not to be regarded lightly. Vitamin deficiency is apparently not the cause of the disorder since specific and dramatic improvement does not follow even the most vigorous of vitamin therapy.

3:30 INTERMISSION

3:45 THE FOLLOW UP PROCEDURE ON CASES AND SUSPECTED CASES FOUND IN MASS CHEST X-RAY SURVEY

Hilbert Mark, M.D., Minneapolis, Minnesota

The results of 40,000 consecutive examinations of the general public in Minnesota have been evaluated to emphasize the existence of many pulmonary conditions which simulate tuberculosis. In this study there were found 623 cases with abnormal pulmonary findings on X-ray. An adequate clinical follow-up and evaluation by the private physician is essential if we are to avoid the numerous diagonistic errors of the past in which we found many persons hospitalized in sanatoria as tuberculous when there was not even a tuberculous infection, while other cases hospitalized in general hospitals, institutions and at home were frankly open cases of pulmonary tuberculosis, but undiagnosed. The responsibility for follow-up is not entirely that of the private physician but must also be borne by the official public health authorities. The role of the health officer and the public health nurse is discussed in brief.

TICKETS FOR ALL SPECIAL EVENTS AVAILABLE AT TIME OF REGISTRATION

TUESDAY AFTERNOON, MAY 13, CONTINUED

4:15 PANEL DISCUSSION OF ALL PAPERS

4:45 MEETING, KANSAS OBSTETRICAL AND GYNECOLOGICAL SOCIETY

Lucien R. Pyle, M.D., Topeka, Kansas, President

6:30 ALUMNI BANQUET, UNIVERSITY OF KANSAS ALUMNI

Roof Garden, Jayhawk Hotel

Presiding: William Algie, M.D., Kansas City, Kansas, President

Program: Purpose
Progress
Prognosis

All speakers will be members of the Alumni Association of the University of Kansas School of Medicine and members of the Kansas Medical Society.

6:30 ALUMNI BANQUET, ALL OTHER SCHOOLS

Roof Garden, Kansan Hotel

Presiding: John M. Porter, M.D., Concordia, Kansas

Business Meetings: Arrangements by Individual School Alumni Groups

Program: Miss Lucille Elmore, Topeka, Kansas, Ventriloquist

9:00 HOUSE OF DELEGATES

Convention Hall, Jayhawk Hotel

9:00 OPEN HOUSE, SHAWNEE COUNTY MEDICAL SOCIETY ROOMS, 300 WEST EIGHTH STREET

Members of Shawnee County Medical Society, Hosts

WEDNESDAY MORNING, MAY 14

8:30 REGISTRATION

South Entrance, Municipal Auditorium

Open 8:30 A.M. to 5:30 P.M.

Opening of Scientific and Technical Exhibits

THIRD GENERAL SESSION

Assembly Room, Municipal Auditorium

Presiding: Porter Brown, M.D., Salina, Kansas

9:00 CHANGING CONCEPTS IN MEDICINE AND THEIR EFFECT UPON MEDICAL EDUCATION

Karl Menninger, M.D., Topeka, Kansas

The enormous expansion of graduate medical education made possible by the Veterans Administration and made necessary by the demand for medical specialists, particularly in psychiatry, has made us realize that just as medical practice has changed, so medical education has changed and is changing. Statistics show that more than 50 per cent of all patients whose illness lasts more than a few days are essentially psychiatric in nature. The difference between 50 per cent of the total number of physicians in this country and the present number of psychiatrists in practice in this country points dramatically to the problem which the new medical education must solve.

WEDNESDAY MORNING, MAY 14, CONTINUED

9:30 THE RHEUMATIC FEVER PROBLEM

Alvin F. Coburn, M.D., Chicago, Illinois

The guest speaker, whose name has been widely associated with the general subject of rheumatic fever, will bring to the physicians of Kansas the results of his important investigations in this field, including the influence of climate, sulfonamide prophylaxis and intravenous salicylate therapy. The paper will be a general review of the entire subject.—*Editor.*

10:00 INTERMISSION

10:15 RECENT ADVANCES IN CHEST SURGERY

Thomas H. Burford, M.D., St. Louis, Missouri

A comprehensive outline of the scope of modern thoracic surgery with a brief discussion of the results now obtained in the surgical management of lesions of the chest. A resume of the most recent developments in this rapidly developing surgical specialty. The recent trend toward resection surgery in tuberculosis is discussed.

10:45 BLOOD LOSS DURING PLACENTAL STAGE

Lester D. O'Dell, M.D., Chicago, Illinois

Hemorrhage is a leading cause of maternal death. Most deaths attributed to hemorrhage have many preventable factors. Proper management of the second stage of labor will often prevent bleeding during the third. The baby should be delivered in stages with a 30 to 60 second pause after the delivery of each shoulder, requiring a total of at least three minutes. After the fetus is expelled, compress placenta into vagina and extract it by pulling on the cord. An intravenous injection of one unit of solution of posterior pituitary or 0.2 or 0.4 mg. ergotrate may be injected intravenously after the posterior shoulder. If bleeding occurs express placenta by Crede' or explore and remove the placenta manually. Replace all blood lost as a result of hemorrhage by transfusion of whole blood, preferably with at least 1000 ml.

11:15 PANEL DISCUSSION OF ALL PAPERS

12:15 ROUND TABLE LUNCHEONS

Obstetrics and Gynecology—Walnut Room, Kansan Hotel

Guest Speaker: Lester D. O'Dell, M.D., Chicago, Illinois

Presiding: R. A. Schwegler, M.D., Lawrence, Kansas

Thoracic Surgery—Rose Room, Jayhawk Hotel

Guest Speaker: Thomas H. Burford, M.D., St. Louis, Missouri

Presiding: Paul W. Schafer, M.D., Kansas City, Kansas

Rheumatic Fever—Roof Garden, Kansan Hotel

Guest Speaker: Alvin F. Coburn, M.D., Chicago, Illinois

Presiding: Paul C. Carson, M.D., Wichita

Kansas Heart Society. Business Meeting to Follow Rheumatic Fever Luncheon

Philip W. Morgan, M.D., Emporia, Kansas, President

EENT—Green Rooms, Mezzanine Floor, Jayhawk Hotel

Guest Speakers: Louis J. Birsner, M.D., St. Louis, Missouri
Samuel J. Meyer, M.D., Chicago, Illinois

Presiding: George Gsell, M.D., Wichita, Kansas

TICKETS FOR ALL SPECIAL EVENTS AVAILABLE AT TIME OF REGISTRATION

WEDNESDAY AFTERNOON, MAY 14

FOURTH GENERAL SESSION

Assembly Room, Municipal Auditorium

Presiding: Philip W. Morgan, M.D., Emporia, Kansas

2:00 ACTIVITIES OF THE AMERICAN MEDICAL ASSOCIATION

George F. Lull, M.D., Chicago, Illinois

2:30 REHABILITATION OF THE AMPUTEE

Henry H. Kessler, M.D., Newark, New Jersey

The experience of the amputation centers of the Army, Navy and Veterans Administration, in caring for more than 18,000 war casualties resulting in major amputations, shows the advantage of an integrated program of treatment. The following five points make up the basis of this program: (1) psychological preparation; (2) adequate surgery; (3) after-care of the stump; (4) selection and manufacture of prosthesis; (5) training in the use of the prosthesis. Rehabilitation begins at the time of operation, and the object of the five-point program is to make help superfluous. This is not only an ideal but a challenge to the surgeon.

3:00 INTERMISSION

3:15 THE PRESENT STATUS OF HEART AND GREAT VESSELS SURGERY

Thomas H. Burford, M.D., St. Louis, Missouri

A discussion of the modern methods of correcting abnormalities of the heart and great vessels. The diagnosis and evaluation of each type of case amenable to surgery is given. The technical procedures employed in correcting lesions of the heart and great vessels are discussed and illustrated.

3:45 AN INQUIRY INTO THE CAUSES FOR BLEEDING FROM UTERINE MYOMATA

Lester D. O'Dell, M.D., Chicago, Illinois

The bleeding associated with uterine myomata is largely dysfunctional or due to an increased menstruating surface. Such tumors rarely bleed in themselves since they have little influence upon the endometrial flow stimulated by ovarian hormones.

The treatment for myomata has depended mostly upon hysterectomy. Myomectomy is not recommended, because of its complications. Radium or x-ray are considered palliative and are used on poor surgical risks. It is important to eliminate genital cancer as a cause for bleeding before attempting palliative or curative procedures for uterine myomata.

4:15 PANEL DISCUSSION OF ALL PAPERS

7:00 ANNUAL BANQUET — TOPEKA HIGH SCHOOL CAFETERIA, 10TH AND TAYLOR STREETS

Paricutin, Mexico's Newest Volcano

Fred M. Bullard, Ph.D., Austin, Texas

THURSDAY MORNING, MAY 15

8:30 REGISTRATION

South Entrance, Municipal Auditorium

Opening of Scientific and Technical Exhibits

FIFTH GENERAL SESSION

Assembly Room, Municipal Auditorium

Presiding: Wayne C. Bartlett, M.D., Wichita, Kansas

9:00 RESECTION OF THE RIGHT COLON FOR MALIGNANT TUMORS

Edward S. Judd, Jr., M.D., Rochester, Minnesota

In comparing the right colon with other sites of development of malignant tumors throughout the gastro-intestinal tract, one frequently concludes with a note of optimism as far as surgical management is concerned. The present day pre-operative measures combined with a wide resection which can be performed as a one stage procedure tend toward a very satisfactory situation in a large number of patients. The operation is being extended to a larger group of people and the results are more and more gratifying. The hospital mortality has reached a very low level and the morbidity figures are considerably more satisfactory. This paper will be accompanied by a motion picture on one method of resection.

9:30 NUTRITION AND DISEASES OF THE LIVER

Marion A. Blankenhorn, M.D., Cincinnati, Ohio

Disorders of nutrition have been seen associated with chronic liver disease ever since we have been able to recognize deficiency states due to want of niacine, thiamine, riboflavin, and others. In man the role of specific deficiency disease in producing cirrhosis is not known, but in animals liver disease—even a form of cirrhosis—can be produced by manipulation of the diet. Both symptomatic and non-symptomatic disease of the liver in man can be affected by diet after the principles developed from animal experimentation. A discussion of the various phases of liver disease, i. e. methods of diagnosis and treatment, is presented. This has to do mainly with cirrhosis and prolonged malnutrition. The treatment of hepatic coma as it occurs in acute liver disease is discussed as to principles and results.

10:00 INTERMISSION

10:15 MANAGEMENT OF DIVERTICULOSIS AND DIVERTICULITIS OF THE COLON

Philip W. Brown, M.D., Rochester, Minnesota

Since 5 to 10 per cent of all people over the age of forty have diverticula, it becomes the responsibility of the physician to know whether or not they are contributing to the patient's symptoms, what one should do to minimize trouble in the diverticula, and also to have a reasonable statistical basis on which to give a prognosis. The results in the medical management have been reviewed over a period of a number of years. Likewise the indications and results in the cases in whom surgery has been necessary have been reviewed. It is important to know that the condition may be difficult to differentiate from malignancy, although diverticulitis in itself has nothing to do with malignancy.

10:45 FRACTURES AND DISLOCATIONS OF THE CERVICAL SPINE

James B. Weaver, M.D., Kansas City, Kansas

A review of all cases of fracture and dislocations of the cervical spine at the University of Kansas Hospitals since 1924. Illustrated with slides.

11:15 PANEL DISCUSSION OF ALL PAPERS

TICKETS FOR ALL SPECIAL EVENTS AVAILABLE AT TIME OF REGISTRATION

THURSDAY MORNING, MAY 15, CONTINUED

12:15 ROUND TABLE LUNCHEONS

Nutritional Disorders—Walnut Room, Kansan Hotel
Guest Speaker: Marion A. Blankenhorn, M.D., Cincinnati, Ohio
Presiding: Thomas T. Holt, M.D., Wichita, Kansas

Gastro-Intestinal Surgery—Rose Room, Jayhawk Hotel
Guest Speaker: Edward S. Judd, Jr., M.D., Rochester, Minnesota
Presiding: Thomas P. Butcher, M.D., Emporia, Kansas

Orthopedics—Circle Ranch, Mezzanine Floor, Kansan Hotel
Guest Speaker: James B. Weaver, M.D., Kansas City, Kansas
Presiding: C. W. Hall, M.D., Hutchinson, Kansas

Gastro-Enterology—Green Room A, Mezzanine Floor, Jayhawk Hotel
Guest Speaker: Philip W. Brown, M. D., Rochester, Minnesota
Presiding: G. E. Kassebaum, M.D., El Dorado, Kansas

Neuropsychiatry—Roof Garden, Kansan Hotel
Guest Speaker: Karl Menninger, M.D., Topeka, Kansas
Presiding: William Roth, M.D., Kansas City, Kansas.

THURSDAY AFTERNOON, MAY 15

SIXTH GENERAL SESSION

Assembly Room, Municipal Auditorium
Presiding: C. H. Benage, M.D., Pittsburg, Kansas

2:00 DIAGNOSIS OF OBSCURE FEVERS

Marion A. Blankenhorn, M.D., Cincinnati, Ohio

Obscure fevers as seen in hospital practice have not been made more frequent nor less by the almost universal use of antibiotics. This is the opinion to be given from inspection of records at the Cincinnati General Hospital. Such obscure fevers as were found at the Cincinnati General Hospital in the past six years are quite like the reported case material from other hospitals in years past. For discussion, fevers are here designated as high fever (102° or more) of short duration (a month or less) and low fever (102° or less) of long duration (a month or more). In these two categories various specific diseases are named and the methods of diagnosis discussed. Tuberculosis, leukemia, and malignant tumors continue to be the leading causes of obscure fevers. Drug fevers, psychogenic fevers, and normal temperature variations simulating fevers are discussed as to diagnosis and treatment.

2:30 THE PRESENT STATUS OF SURGICAL TREATMENT FOR DUODENAL ULCER

Edward S. Judd, Jr., M.D., Rochester, Minnesota

Recent enthusiasm for vagus nerve resection in duodenal ulcer has led to critical analysis of the types of operation which have been employed for this condition in previous years. The problem resolves itself first of all into a very rigid scrutiny of any patient in whom the diagnosis of duodenal ulcer is substantiated to be thoroughly certain that medical management can no longer be the complete answer to his individual problem. At all clinics and medical centers at the present time, recent enthusiasm for the newer type of surgery has also sounded previously half-forgotten warnings that the psychic and emotional background of the patient must be thoroughly understood before undertaking any type of surgical procedure. At the present time it is a well founded fact that a large percentage of patients having one or more clear-cut indications for surgical intervention for duodenal ulcer will obtain the most satisfactory results with a rather extensive gastric resection. This operation has withstood the test of time, its limitations are now well-known and the reasons for its failure in a small percentage of cases are quite clear. Vagus nerve resection may well fill a much needed requirement in the treatment of this condition but at the present time, it is still undergoing the test of time.

THURSDAY AFTERNOON, MAY 15, CONTINUED

3:00 MANAGEMENT OF THE IRRITABLE BOWEL SYNDROME

Philip W. Brown, M.D., Rochester, Minnesota

This disturbance of function of the gastro-intestinal tract is, of course, the most commonly encountered problem in gastro-enterology, as well as in general medicine. It constitutes a great bulk of all patients with stomach or bowel trouble. While the over-all picture is a functional one, yet there are a number of possibilities that may contribute in individual cases. It is difficult to outline any specific management and treatment is more that of developing a philosophy in the mind of the patient in regard to the trouble. This is an era in which there is much discussion of psychosomatic angles and we should endeavor to make these problems as simple and practical as possible.

3:30 PANEL DISCUSSION OF ALL PAPERS

4:00 HOUSE OF DELEGATES

5:00 COUNCIL

The Annual Banquet

WEDNESDAY, MAY 14, 7:00 P.M.

Cafeteria, Topeka High School
10th and Taylor Streets

MUSIC

INTRODUCTION OF HONORED GUESTS

PARICUTIN, MEXICO'S NEWEST VOLCANO

FRED M. BULLARD, PH.D.

(Illustrated with colored slides and color movies)



FRED M. BULLARD, PH.D.

Austin, Texas

Dr. Bullard, who is professor of geology at the University of Texas, has studied volcanoes for many years. In 1939 he was assistant in the Hawaiian Volcano Observatory at Kilauea, Hawaii. Since the birth of Paricutin in 1943, he has spent part of each year at the volcano. Last summer, in addition to studies at Paricutin, he made a survey of active volcanoes of Central America.

TICKETS FOR ALL SPECIAL EVENTS AVAILABLE AT TIME OF REGISTRATION

Round Table Luncheons

TUESDAY, MAY 13

CANCER—*Walnut Room, Kansan Hotel*

Guest Speaker: George T. Pack, M.D., New York, New York
Presiding: Howard E. Snyder, M.D., Winfield, Kansas

INTERNAL MEDICINE—*Roof Garden, Kansan Hotel*

Guest Speakers: Alexander Marble, M.D., Boston, Massachusetts
Sloan J. Wilson, M.D., Kansas City, Kansas
Presiding: Ralph G. Ball, M.D., Manhattan, Kansas

EENT—*Green Rooms, Mezzanine Floor, Jayhawk Hotel*

Guest Speakers: Louis J. Birsner, M.D., St. Louis, Missouri
Samuel J. Meyer, M.D., Chicago, Illinois
Presiding: Ralph E. Cheney, M.D., Salina, Kansas

WEDNESDAY, MAY 14

OBSTETRICS AND GYNECOLOGY—*Walnut Room, Kansan Hotel*

Guest Speaker: Lester D. O'Dell, M.D., Chicago, Illinois
Presiding: R. A. Schwegler, M.D., Lawrence, Kansas

THORACIC SURGERY—*Rose Room, Jayhawk Hotel*

Guest Speaker: Thomas H. Burford, M.D., St. Louis, Missouri
Presiding: Paul W. Schafer, M.D., Kansas City, Kansas

RHEUMATIC FEVER—*Roof Garden, Kansan Hotel*

Guest Speaker: Alvin F. Coburn, M.D., Chicago, Illinois
Presiding: Paul C. Carson, M.D., Wichita

KANSAS HEART SOCIETY. Business Meeting to Follow Rheumatic Fever Luncheon

Philip W. Morgan, M.D., Emporia, Kansas, President

EENT—*Green Rooms, Mezzanine Floor, Jayhawk Hotel*

Guest Speakers: Louis J. Birsner, M.D., St. Louis, Missouri
Samuel J. Meyer, M.D., Chicago, Illinois
Presiding: George Gsell, M.D., Wichita, Kansas

THURSDAY, MAY 15

NUTRITIONAL DISORDERS—*Walnut Room, Kansan Hotel*

Guest Speaker: Marion A. Blankenhorn, M.D., Cincinnati, Ohio
Presiding: Thomas T. Holt, M.D., Wichita, Kansas

GASTRO-INTESTINAL SURGERY—*Rose Room, Jayhawk Hotel*

Guest Speaker: Edward S. Judd, Jr., M.D., Rochester, Minnesota
Presiding: Thomas P. Butcher, M.D., Emporia, Kansas

ORTHOPEDICS—*Circle Ranch, Mezzanine Floor, Kansan Hotel*

Guest Speaker: James B. Weaver, M.D., Kansas City, Kansas
Presiding: C. W. Hall, M.D., Hutchinson, Kansas

GASTRO-ENTEROLOGY—*Green Room A, Mezzanine Floor, Jayhawk Hotel*

Guest Speaker: Philip W. Brown, M.D., Rochester, Minnesota
Presiding: G. E. Kassebaum, M.D., El Dorado, Kansas

NEUROPSYCHIATRY—*Roof Garden, Kansan Hotel*

Guest Speaker: Karl A. Menninger, M.D., Topeka, Kansas
Presiding: William Roth, M.D., Kansas City, Kansas

TELEPHONE SERVICE NEAR REGISTRATION DESK. PHONE 9994

Eye, Ear, Nose and Throat Section

TUESDAY, MAY 13, MORNING SESSION

Presiding: Wayne B. Granger, M.D., Emporia, Kansas

8:00 REGISTRATION

South Entrance, Municipal Auditorium

All Meetings in Room 201A

9:45 RETINAL CHANGES IN RELATION TO CERTAIN SYSTEMIC DISEASES (Part 1)

Samuel J. Meyer, M.D., Chicago, Illinois

A large collection of colored fundus pictures will be shown in an attempt to demonstrate the retinal changes in relation to certain systemic diseases. The hypertensive retinopathies, diabetic retinopathies and blood dyscrasies will be taken up in detail. Case histories will accompany the pathological descriptions in an attempt to correlate the medical with the ocular findings.

10:45 INTERMISSION

11:00 APPLIED SURGICAL ANATOMY OF THE SKULL AS A WHOLE

Louis J. Birsner, M.D., St. Louis, Missouri

This lecture and discussion will be given from well selected lantern slides. The structures seen in the norma frontalis, occipitalis, verticalis, lateralis and basalis will be well reviewed. The base of the skull, however, will receive the minutest attention. It is in this area that many obscure problems in ear, nose and throat pathology are found. A thorough knowledge of this area is of great value to everyone.

12:15 ROUND TABLE LUNCHEON

Green Rooms, Mezzanine Floor, Jayhawk Hotel

Guest Speakers: Louis J. Birsner, M.D., St. Louis, Missouri
Samuel J. Meyer, M.D., Chicago, Illinois

Presiding: Ralph E. Cheney, M.D., Salina, Kansas

TUESDAY, MAY 13, AFTERNOON SESSION

Presiding: D. D. Vermillion, M.D., Goodland, Kansas

2:00 RETINAL CHANGES IN RELATION TO CERTAIN SYSTEMIC DISEASES (Part 2)

Samuel J. Meyer, M.D., Chicago, Illinois
See Summary for Part 1 above.

2:45 INTERMISSION

TICKETS FOR ALL SPECIAL EVENTS AVAILABLE AT TIME OF REGISTRATION

3:00 THE SPREAD OF INFECTIONS FROM THE NOSE AND THROAT INTO THE MEDIASTINUM AND LUNGS

Louis J. Birsner, M.D., St. Louis, Missouri

From original slides, a complete review of the applied surgical anatomy of the lower half of the head and neck will be given. Various infections, beginning in the mucous membrane of the nose, throat, pharynx and larynx, will be reviewed.

WEDNESDAY, MAY 14, MORNING SESSION

Presiding: Harold W. Powers, M.D., Topeka, Kansas

9:45 DIAGNOSIS AND TREATMENT OF PRIMARY GLAUCOMA

Samuel J. Meyer, M.D., Chicago, Illinois

A brief resume will be given of the various practical diagnostic findings necessary to make a diagnosis in the primary glaucomas. Some time will be given to visual field changes, methods of examination and provocative tests. Both the medical and surgical treatment will be enlarged upon, as the time will allow.

10:45 INTERMISSION

11:00 THE ANATOMY AND DISEASES OF THE LARYNX

Louis J. Birsner, M.D., St. Louis, Missouri

Slides will be used in this lecture. The larynx will be discussed from birth to adult life. The importance of a complete examination will be stressed. The proper method of examination will be reviewed. The important pathological lesions of the larynx will be reviewed.

12:15 ROUND TABLE LUNCHEON

Green Rooms, Mezzanine Floor, Jayhawk Hotel

Guest Speakers: Louis J. Birsner, M.D., St. Louis, Missouri
Samuel J. Meyer, M.D., Chicago, Illinois

Presiding: George Gsell, M.D., Wichita, Kansas

WEDNESDAY, MAY 14, AFTERNOON SESSION

Presiding: Clifford J. Mullen, M.D., Kansas City, Kansas

2:00 DIAGNOSIS AND TREATMENT OF RETINAL DETACHMENT

Samuel J. Meyer, M.D., Chicago, Illinois

Slides illustrating the various fundus findings in retinal detachment will be shown in an attempt to become familiar with the changes as seen with the ophthalmoscope. Methods of examination will be demonstrated. The latest methods of surgical therapy will be offered so that the average ophthalmologist may do his own surgery with more confidence.

2:45 INTERMISSION

3:00 A REVIEW OF THE FIFTH, SEVENTH, EIGHTH AND NINTH CRANIAL NERVES

Louis J. Birsner, M.D., St. Louis, Missouri

These are the important cranial nerves that are dealt with in the daily and routine problems of the busy ear, nose and throat man. Nerve blocking will be reviewed. The various syndromes will be reviewed.

TELEPHONE SERVICE NEAR REGISTRATION DESK. PHONE 9994

Scientific Movies

Room 102A—Municipal Auditorium

TUESDAY MORNING, MAY 13

9:30 Bilateral Femoral Vein Interruption for the Treatment of Deep Venous Thrombosis and Pulmonary Embolism
10:00 Oxygen Therapy in Heart Disease
10:30 Surgical Treatment of Hypertension by Lumbodorsal Splanchnicectomy
11:00 Two Methods of Glaucoma Surgery: Lundsgards Iris Inclusion Operation; Bentzen's Modification of the Elliott Trephine Operation
11:30 Transthoracic Resection of Esophagus—Lower Third for Carcinoma

TUESDAY AFTERNOON, MAY 13

1:15 Anomalies of the Bile Ducts and Blood Vessels; Strictures of the Common Duct. Warren Cole, M.D.
2:00 Peritoneoscopy. An Adjunct in the Diagnosis of Intra-abdominal Pathology. R. Nichol Smith, M.D.
2:30 Diagnosis of Urologic Conditions
3:15 Complications of the Second Stage of Labor
3:30 Post Partum Hemorrhage
4:15 Human Sterility

WEDNESDAY MORNING, MAY 14

9:00 Regional Anesthesia
10:00 Fluoroscopic Diagnosis of Cardiac Infarction
10:30 Cataract Extraction. Jack S. Guyton, M.D.
Blepharoptosis. Daniel B. Kirby, M.D.
11:15 The Anemias. William P. Murphy, M.D.

WEDNESDAY AFTERNOON, MAY 14

1:15 The Treatment of Asphyxia Neonatorum
1:45 The Prevention and Treatment of Eclampsia
2:30 Folvite in the Treatment of Anemia
3:00 Vagotomy. Waltman Walters, M.D.
3:15 Pancreato-Duodenal Resection for Carcinoma of the Head of the Pancreas or Carcinoma of Ampulla of Vater
3:45 Subdural Hematoma
4:15 Right Pneumonectomy for Primary Carcinoma of the Lung

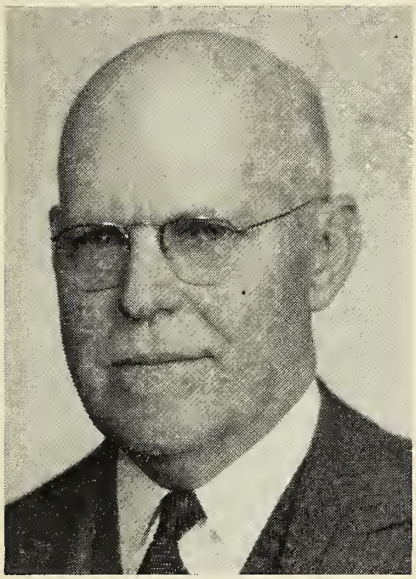
THURSDAY MORNING, MAY 15

9:00 Pericardial Resection for Constrictive Pericarditis
9:30 Diagnostic Tests in Peripheral Arterial Disease
10:00 Intravenous Anesthesia
11:00 Refrigeration Anesthesia in a Leg Amputation

THURSDAY AFTERNOON, MAY 15

1:30 Crushing of the Phrenic Nerve
2:00 Managing Fresh Wounds of Violence
3:00 Prevention and Care of Athletic Injuries
3:30 Surgical Anatomy of the Female Pelvis
4:00 Sigmoid Sinus Thrombosis

Retiring President and President-elect



WILLIAM MERRILL MILLS, M.D.
Retiring President

The Society looks back with pride upon the accomplishments during this memorable year and is grateful to Dr. Mills for his wise and tireless leadership. Under his direction, the young members of the Kansas Medical Society, especially those officers who served with the armed forces in World War II, have been placed in positions of responsibility. Their presence on many committees has strongly influenced the activities of the Society and has given to the organization a new vitality. Many of these committees have worked hard, and most are engaged in projects of far-reaching importance that will require years for completion.

Dr. Mills has given much time to the Society's program for veterans. He negotiated a new contract with the Veterans Administration, and the plan is working well. Kansas Physicians' Service has grown remarkably and has discharged all its financial obligations to the Society. In this project Dr. Mills had a dual interest because he served also as treasurer for Kansas Physicians' Service.

Perhaps the most memorable event of the year occurred when the Kansas legislature determined, by an overwhelming majority, that adequate training was necessary before a person would be permitted to practice medicine and surgery in Kansas. It represents a forward step in the continuing effort of the medical profession of this state to protect the people from unqualified practitioners of the healing arts. This event will record Dr. Mills' administration in the history of the Society as outstanding.

The Society is looking forward to the coming year with confidence. Dr. Laurence S. Nelson of Salina is well known among physicians in all parts of the state and is widely respected and admired. His intense pride in medicine, his broad understanding of the problems confronting the profession and his unbounded enthusiasm give Dr. Nelson a rare combination of qualities for leadership.

Having long been on the council, Dr. Nelson is well acquainted and closely associated with all phases of Society activities. In each of the major projects in which the Society is currently engaged he has had a prominent part. As a member of the Kansas State Board of Health, he is also in a position to evaluate not only the health needs of the state as a whole but the public health picture on a national level. His personal interest in the distribution of physicians, in hospital construction, in public health and in all activities relating to medicine will be reflected in the work of the Society during the coming year.

The Kansas Medical Society is grateful to Dr. Nelson for the many contributions he has made in the past, and now, at the beginning of his year as president, pledges to him complete support and cooperation.



LAURENCE STRONG NELSON, M.D.
President-elect

SCIENTIFIC EXHIBITS

1. Kansas State Dental Society.
2. Department of Physical Medicine, Winter Veterans Administration Hospital.
3. "Maternal and Infant Mortality in Kansas"—Maternal Welfare and Child Welfare Committees of Kansas Medical Society, Division of Maternal and Child Health of Kansas State Board of Health.
4. Division of Tuberculosis Control of Kansas State Board of Health, Control of Tuberculosis Committee of Kansas Medical Society, State and Local Tuberculosis Associations.
5. Division of Venereal Disease Control of Kansas State Board of Health, Committee on Venereal Disease of Kansas Medical Society.
6. Committee on Blood Plasma of Kansas Medical Society.
7. Kansas State Nurses' Association.
8. Hospital Survey Committee of Kansas Medical Society.
9. Kansas Tuberculosis and Health Association.
10. Kansas Vocational Rehabilitation Division.
11. Kansas Crippled Children Commission.
12. State Sanatorium for Tuberculosis.
13. Committee on Anesthesiology of Kansas Medical Society.
14. "Virus Pneumonia"—L. K. Chont, M.D., Winfield, Kan.
15. "Cancer Diagnosis from Smears"—Wendell A. Grosjean, M.D., Winfield, Kan.
16. Committee on Control of Cancer of Kansas Medical Society, Kansas Division of American Cancer Society, Division of Cancer Control of Kansas State Board of Health, Extension Division of University of Kansas.
17. Kansas Division of American Cancer Society.
18. "Penetrating Wounds of the Brain, a Physiological Study"—Ralph M. Stuck, M.D., Denver, Colo.
19. Committee on Medical Assistants of Kansas Medical Society.
20. "Hospitals"—Kansas State Board of Health.
21. "The Unweighted Brace in the Treatment of Perthes Disease"—Charles R. Rombold, M.D., H. O. Anderson, M.D., Henry O. Marsh, M.D., Wichita, Kan.

TECHNICAL EXHIBITS

Booths 1 and 2—Goetze Niemer Company, St. Joseph, Mo.
Booth 3—A. S. Aloe Company, St. Louis, Mo.
Booths 4 and 5—United Medical Equipment Company, Kansas City, Mo.
Booth 6—Quinton-Duffens Optical Company, Topeka, Kan.
Booths 7 and 8—Mid-West Surgical Supply Company, Wichita, Kan.
Booth 9—Medical Protective Company, Fort Wayne, Ind.
Booths 10 and 11—Munns Medical Supply Company, Inc., Topeka, Kan.
Booth 12—Pet Milk Company, St. Louis, Mo.
Booth 14—E. R. Squibb and Sons, New York, N. Y.
Booth 15—Zimmer Manufacturing Company, Warsaw, Ind.
Booth 16—Pitman-Moore Company, Kansas City, Mo.
Booth 17—Luzier's Fine Cosmetics, Lincoln, Nebr.
Booth 18—Winthrop Chemical Company, Inc., New York.
Booth 19—Davis and Geck, Inc., Brooklyn, N. Y.
Booth 20—Van Pelt and Brown, Inc., Richmond, Va.
Booth 21—Mead Johnson and Company, Evansville, Ind.
Booth 22—Siebrandt Manufacturing Company, Kansas City, Mo.
Booth 23—General Electric X-ray Corporation, Kansas City, Mo.
Booth 24 and 25—Blue Cross and Kansas Physicians' Service, Topeka, Kan.
Booth 26—W. B. Saunders Company, Philadelphia, Pa.
Booth 27—Dumas-Wilson and Company, St. Louis, Mo.
Booth 28—Ciba Pharmaceutical Products, Inc., Summit, N. J.
Booth 29—Riggs Optical Company, Kansas City, Mo.
Booth 30—Western Typewriter Company, Topeka, Kan.
Booth 31—Holland Rantos Company, Inc., New York.
Booth 32—William S. Merrell Company, Cincinnati, Ohio.
Booth 33—Gerber Products Company, Fremont, Mich.
Booth 34—Sharp and Dohme, Inc., Philadelphia, Pa.
Booth 35—W. E. Isle Company, Kansas City, Mo.
Booth 40—White Laboratories, Inc., Newark, N. J.
Booth 41—American Hospital Supply Corporation, Evanston, Ill.
Booth 42—H. G. Fischer and Company, Chicago, Ill.
Booth 45—American Optical Company, Kansas City, Mo.
Booth 50—The Borden Company, New York, N. Y.
Booth 51—Burroughs Wellcome and Company, Inc., New York, N. Y.
Booth 51A—Topeka Coca-Cola Bottling Company, Topeka, Kan.
Booth 52—J. B. Lippincott Company, Philadelphia, Pa.
Booth 55—Greb X-ray Company, Kansas City, Mo.
Booth 59—Westinghouse Electric Corporation, Kansas City, Mo.
Booth 60—Becton, Dickinson and Company, Rutherford, N. J.
Booth 61—Schering Corporation, Bloomfield, N. J.
Booth 62—Lederle Laboratories Division, New York, N. Y.
Booth 64—Parke Davis and Company, Detroit, Mich.
Booth 66—Ortho Pharmaceutical Corporation, Raritan, N. J.
Booth 67—M and R Dietetic Laboratories, Inc., Columbus, Ohio.
Booth 68—G. D. Searle and Company, Chicago, Ill.
Booth 69—C. B. Fleet Company, Inc., Lynchburg, Va.
Booth 71—Eli Lilly and Company, Indianapolis, Ind.

COMMITTEE CHAIRMEN

General Chairman—Dwight Lawson, M.D.
Scientific Program—Don C. Wakeman, M.D.
Commercial Exhibits—L. A. Curry, M.D.
Scientific Exhibits—Henry S. Blake, M.D.
Arrangements—B. I. Krehbiel, M.D.
Reception—Lucius E. Eckles, M.D.
Publicity—Harry J. Davis, M.D.
Entertainment—James D. Bowen, M.D.
Auxiliary—Leo A. Smith, M.D.

Woman's Auxiliary to the Kansas Medical Society

TUESDAY, MAY 13

9:00 A. M. REGISTRATION

South Entrance, Municipal Auditorium

Open 9:00 A.M. to 4:00 P.M.

9:30 A. M. PRE-CONVENTION BOARD MEETING

Convention Hall, Jayhawk Hotel

2:00 P. M. TEA

Governor's Mansion, 801 Buchanan Street

Serving 2:00 to 4:00

6:30 P. M. DINNER-ENTERTAINMENT-CARDS

Topeka Country Club, 27th and Buchanan Streets

WEDNESDAY, MAY 14

9:00 A. M. REGISTRATION

South Entrance, Municipal Auditorium

Open 9:00 A.M. to Noon

9:30 A. M. GENERAL SESSION

Convention Hall, Jayhawk Hotel

1:00 P. M. LUNCHEON

Hotel Jayhawk Roof

3:00 P. M. POST-CONVENTION BOARD MEETING AND TEA

Home of Mrs. J. L. Lattimore, 1185 College Avenue

7:00 P.M. ANNUAL BANQUET, KANSAS MEDICAL SOCIETY

Topeka High School Cafeteria, 10th and Taylor Streets

THURSDAY, MAY 15

10:30 A.M. TOUR OF GOODYEAR TIRE AND RUBBER COMPANY PLANT

Leaving from Jayhawk Hotel

COMMITTEE CHAIRMEN

General Chairman—Mrs. Lucien R. Pyle
Registration Chairman—Mrs. W. W. Reed
Transportation Chairman—Mrs. Harry J. Davis
Courtesy Chairman—Mrs. H. H. Woods
Dinner Chairman—Mrs. Omer M. Raines
Tea Chairman—Mrs. Byron J. Ashley
Luncheon Chairman—Mrs. Richard Greer
Board Tea Chairman—Mrs. F. C. Taggart
Publicity Chairman—Mrs. R. D. Dickson

Kansas Medical Assistants' Society

Annual Meeting, May 11 and 12, 1947

Hotel Jayhawk, Topeka, Kansas

SUNDAY, MAY 11

10:00 A.M. Registration. Open 10:00 A.M. to 2:00 P.M. Hotel Jayhawk

2:00 P.M. Address of Welcome—Harry J. Davis, M.D., Member, Kansas Medical Society Committee on Medical Assistants, Topeka, Kansas

2:15 P.M. Response—Laurence S. Nelson, M.D., President-Elect, Kansas Medical Society, Salina, Kansas

2:30 P.M. The Patient and His Personality Characteristics—Ruth I. Barnard, M.D., Assistant Medical Director, Menninger Foundation, Topeka, Kansas

3:00 P.M. The Treatment of Veterans under the Kansas State Plan—E. H. Gibbons, M.D., Medical Coordinator, Veterans Administration Medical Service Center, Topeka, Kansas

3:30 P.M. "The Melodears"—Miss Nadine Knudson, Miss Betty Shaffer, Miss Helen Heathman, Topeka, Kansas

4:00 P.M. Election of Officers

5:00 P.M. Buffet Supper. Serving from 5:00 P.M. to 7:00 P.M.

7:15 P.M. Impersonations—Miss Agnes Hannigan, Topeka, Kansas

7:45 P.M. Colored Travel Pictures

MONDAY, MAY 12

9:00 A.M. Registration. Open 9:00 A.M. to 10:00 A.M.

10:00 A.M. Meeting Called to Order—Mrs. Marjorie Euler, President, Kansas Medical Assistants' Society, Topeka, Kansas

10:05 A.M. Greetings—Miss Charlotte Ellis, President, Shawnee County Medical Assistants' Society, Topeka, Kansas

10:10 A.M. Response—Miss Maxine Williams, Wyandotte County Medical Assistants' Society, Kansas City, Kansas

10:15 A.M. The Nicest Person I Know—Clyde O. Merideth, Jr., M.D., Chairman Kansas Medical Society Committee on Medical Assistants, Emporia, Kansas

11:00 A.M. The Future Medical Assistant—Mr. Oliver E. Ebel, Executive Secretary, Kansas Medical Society, Topeka, Kansas

11:30 A.M. "Information Please"—Mrs. Florence Linton, Topeka, Kansas, assisted by Miss Maxine Williams, Kansas City, Kansas; Miss Irene Miller, Emporia, Kansas; Miss Thelma Dean, Manhattan, Kansas; Mrs. Pauline Keller, Topeka, Kansas

12:30 P.M. Luncheon

Guest Soloist—Miss Mary Campbell, accompanied by Miss Nadine Knudson, Topeka, Kansas

1:30 P.M. "What I Saw in Greece and Turkey"—Alpha H. Kenna, Ph.D., Topeka, Kansas

2:00 P.M. Installation of Officers—Miss Charlotte Ellis, assisted by Mrs. Pauline Keller, Topeka, Kansas

3:00 P.M. Tour of Winter Veterans Administration Hospital

3:00 P.M. Viewing of Exhibits, Municipal Auditorium, 8th and Quincy Streets

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

Topeka is inviting the profession of Kansas to another annual meeting, the second post-war convention for the doctors who were in service. As your president I urge every doctor and his wife to attend at least part of the sessions and help make this occasion measure up to Wichita's 1946 meeting both from the standpoint of education and pleasure.

The annual meeting provides an opportunity for younger men to get acquainted and form valuable contacts with doctors from all parts of the state. This frequently leads to inclusion on state committees and an active participation in the work of the state society. The functioning of the House of Delegates gives valuable training in parliamentary procedure which will repay many a weary delegate.

The results of the biennial legislative battle which are chronicled in another part of this issue are the culmination of a cooperative effort which began a year ago. While many of us contributed time and effort, none compare with John Lattimore and Oliver Ebel in diligence and efficiency. Kansas medicine is their debtor.

This President's Page will be the last one above my signature, and the capable ball-point of Dr. Laurence S. Nelson will fall heir to the place. We have no qualms about the future of this page, the Kansas Medical Society or the profession of medicine in the United States.



President

EDITORIALS

The 1947 Legislative Session

As the 1947 session of the Kansas legislature draws to a close, the status of medicine in relation to cults and those practitioners of the healing arts with inadequate training remains as it was. Bills of interest to the medical profession have been regularly reported to the secretaries of all county societies but this summary is prepared to give the membership a general review.

Interest in hospitals and hospital construction was evidenced throughout the session. At least 20 individual bills were introduced to enable cities or counties or districts composed of several counties to issue bonds for hospital construction. There was almost no opposition to bills of this type and as far as is known all passed. The most significant legislation regarding hospitals were House Bill 67 and House Bill 399, both of which passed. House Bill 67 creates an advisory council consisting of three hospital representatives, two doctors and four others to be appointed by the governor and to work with the State Board of Health in licensing hospitals. House Bill 399 gives to the board appointed under House Bill 67 the authority to act as the advisory commission to the Kansas State Board of Health in surveying hospital needs in Kansas and distributing funds allotted by the federal government to hospital construction.

The enabling act for Blue Cross and the enabling act for Kansas Physicians' Service were modified with the passage of House Bill 23 and House Bill 24. Both have been signed by the governor and printed in the official state paper and are now in effect. These changes were requested for the purpose of saving administrative expense in the operation of voluntary prepayment health plans and are expected to save $30,000 a year in operating costs. Both these bills had previously been discussed with the commissioner of insurance and on the basis of his approval had no difficulty in either house.

There were many bills introduced which were of particular interest to the Kansas State Board of Health. By and large this agency was granted almost everything that had been requested. Appropriations for the Board of Health remained almost as they were before. Among bills affecting the Board of Health that failed to pass was one to build a structure to house the state laboratory. A second bill that failed was a standard milk ordinance in which a three-man board consisting of the secretary of the Board of Health, the secretary of the Board of Agriculture and the attorney general was to regulate the production of milk in Kansas. Two bills of considerable interest to the medical profession were introduced by Dr. J. L. Lattimore, representative from Shawnee County. House Bill 102 requires a serological examination for syphilis before a marriage license can be granted. Passing without noticeable difficulty in the House, this bill ran into trouble in the Senate where it was considerably amended to require medical statements on conditions other than syphilis. The amendments were accepted by the House and the bill passed. House Bill 103 creates an advisory commission to the Board of Health by which all matters pertaining to laboratory procedures must be approved before they may be acted upon by the Board of Health. The advisory commission is to be appointed by the governor. This represents a change in procedures affecting the Board of Health and, if satisfactory, other groups in the future will probably attempt to follow this pattern by requesting legislation to create advisory commissions to handle their problems.

There were many general bills on various subjects. The Workmen's Compensation law was changed to allow a maximum of $750 instead of $500 for injuries under Workmen's Compensation. Other benefits in this program were also increased under House Bill 77, which was introduced by Mr. Blake Williamson of Wyandotte County. A second bill affecting Workmen's Compensation, to include certain occupational diseases, was killed. Besides these, there appeared many appropriation measures for the various state hospitals and the medical school at the University of Kansas. In a number of instances appropriations were made for building additions to state institutions. There were numerous measures regarding the production of milk and the testing of cattle for Bang's disease and tuberculosis. A considerable change was made in the drivers' license law requiring examinations under certain conditions for applicants for drivers' licenses. Also there were bills on many other subjects.

Of primary interest to the medical profession, however, were bills relating to the standards of medical practice. Many activities occurred to affect measures of this kind but as far as this session of the legislature is concerned, March 19 was the important day. On that day the Committee of State Affairs in the House killed a bill introduced by the optometrists of Kansas to broaden the licensing powers of the Kansas Board of Optometry. On the same day the Committee of State Affairs in the House killed a bill introduced by naturopaths setting up a board of naturopathic examiners and defining their rights and responsibilities. On the same day also the House voted, by a majority of about three to one, to strike the enacting clause from House Bill 178, the bill introduced by osteopaths to broaden their powers.

Rather early in the session House Bill 178 was introduced by two of the three osteopaths in the House in an attempt to have this made a committee bill. As such it would have received the prestige of the committee and at least a psychological advantage. This effort failed and the bill was subsequently introduced as an individual bill on the floor. It went to the Committee on Hygiene and Public Health where it was discussed and voted on favorably. In the meantime a group of friends of the osteopaths introduced House Bill 308 which was designed to increase the power of the osteopaths in Kansas in another way. The committee voted to kill this bill on the same day that the other bill was passed out.

On March 19 House Bill 178 was discussed on the floor. After the osteopath made his introductory remarks, Dr. Lattimore spoke to the House for 45 minutes with a brilliance that has seldom been heard in the legislative halls of our state. Newspapers proclaimed his oratory, and it was well known that when Dr. Lattimore had finished the osteopath bill was dead. Then Blake Williamson of Kansas City, former attorney for the Kansas State Board of Medical Registration and Examination and now representative from Wyandotte county and floor leader of the majority party, arose to speak on the legal implications of this bill. His logic and the weight of his argument completely annihilated any remaining hope that could be held by supporters of the osteopathic cause. The standing vote was so overwhelmingly in favor of killing the measure that an official count was never taken. There seems no doubt, however, that more than three to one voted in favor of killing the bill.

Except for minor flurries of activity between that date and the close of the session, there never remained any serious problems that the medical profession had to deal with. The Kansas legislature has again refused to permit improperly trained practitioners of the healing arts to do surgery or to administer drugs. As a public service to the people of the state in protecting their lives from lesser qualified practitioners, the people of Kansas should be grateful to Dr. Lattimore for completely explaining the situation; to Mr. Williamson for adding the weight of his knowledge to the argument; to the legislative body for its interpretation of facts and expression of confidence; to Mr. Munns for much valuable work; and to the many other persons who have so diligently worked to preserve and to raise the standards of medical care for the people of Kansas.

Councilor Reports

FIRST DISTRICT

To the House of Delegates:

The medical situation in the First District is good. Nearly all the officers are back from the services, most of them in their old locations; a few have moved to other fields. A few new ones have come into this area, which I believe is adequately serviced at the present time. There may be a slight surplus in one or two localities.

The total number of doctors of medicine is 87, 73 of whom are members of the Society. Three are honorary members and 11 are non-members. Of the non-members, three are on probation; six are inactive.

Each county has an active medical society. Two district meetings are being planned for early spring.

Respectfully submitted,
R. T. Nichols, M.D., *Councilor.*

SECOND DISTRICT

To the House of Delegates:

Insofar as we have been able to ascertain, all physicians in our district who have returned from service have been given the opportunity of participating in the plan of the Veterans Administration for the medical care of veterans.

The officers of the Kansas Medical Society have, we believe, contributed greatly to an important problem in so comprehensive a program with the aid of the Veterans Administration.

Respectfully submitted,
Lewis G. Allen, M.D., *Councilor.*

THIRD DISTRICT

To the House of Delegates:

I herewith submit a report concerning the activity of the councilor for the Third District during the past year.

The year itself has been characterized by many adjustments which necessarily carry many changes as to attitude, policy and opinion, and I feel that the Society has, as a whole, been able through its council and officers to meet these situations in a profitable manner, as will be evidenced from the record of each of the programs instituted or modified during the past year. Some of these programs were undertaken with considerable skepticism at the onset. However, time has caused a change of opinion, as well as diminished skepticism.

I feel that one of the greatest problems that we have facing us at the moment is legislative in character. It behooves the Society to maintain the proper medical care and distribution which will, in itself, do more than anything else to offset some bureaucratic attempt to socialize the profession, as well as to avoid infringement by some who aren't willing to be subjected to the same rules and regulations as are prescribed for our profession. Our success or failure will be judged in a large measure by our own behavior. Thus, unity in number as well as purpose, and the motive to do good, could well be used as a guide and balance for the days that lie ahead.

Respectfully submitted,
C. H. Benage, M.D., *Councilor.*

FOURTH DISTRICT

To the House of Delegates:

There is not much of interest to report from this district. Practically all of the men are back from the service and several new men are now practicing here. Many of the small towns which had physicians before the war do not have any now. This, of course, follows the trend all over the United States.

Many of the men are definitely dissatisified with the veterans service set-up. They feel that the procedure should be simplified and some feel that it would be a good idea to have meetings with Veterans Administration authorities to iron out some of the difficulties they have in filling out various blanks.

So far their contact with the Physicians Service has been satisfactory although most of them have had very little experience with it due to the fact that it was only recently established here.

Respectfully submitted,

Frank Foncannon, M.D., *Councilor.*

FIFTH DISTRICT

To the House of Delegates:

Geographically the Fifth Councilor District occupies the central section of Kansas. Included are the counties of Marion, McPherson, Harvey, Rice, Reno, Barton and Stafford.

This area is a rural agricultural section, and in addition to the usual medical and surgical problems, home and farm accidents rank first. Federal highways 50N and 50S cross the territory east and west; 281, 81 and 77 north and south. These through federal highways, together with state and tributary roads, contribute a heavy toll of bizarre fractures and trauma from highway accidents.

Flour milling, railroad and oil development industries add to the need for medical and surgical skills and adequate hospital facilities.

As your councilor, I am happy to report our county societies are aware of their responsibility for the efficient care of the sick and injured. Every county in the district has an organized society. During 1946 the societies of this district held 861 scientific and business meetings, but with only 32 per cent of the membership attending.

Our district is supplied with an adequate number of physicians and surgeons since the return of a goodly number from military service.

The total population of the seven counties comprising the district is 161,500, served by 152 registered physicians. Over 90 per cent are members of the Kansas Medical Society. One physician for a population of 1500 is considered sufficient for adequate medical care.

We enjoy excellent hospital facilities and plans are under way for additional beds and increased personnel. A recent public health service survey indicates the need for 147 additional beds in the Fifth District, 2828 being assigned to Kansas. Hospitals in the district number 16, hospital beds 952 and bassinets 169. This provides approximately six beds per 1000 population, which compares very favorably with the national standard of adequacy of 4.5 beds per 1000 population.

My suggestion for the coming biennium would be the revival of a strong and healthy competitive spirit within the profession or between groups of doctors, for group practice is supplanting solo practice in Kansas. This competitive spirit should be tempered by the friendly get-together of the county society. Have your meetings at regular stated intervals, preferably monthly. Have an active attendance committee with the special assignment of reporting the doctor who is "too busy" to attend meetings or participate in the society activities.

Respectfully submitted,

John L. Grove, M.D., *Councilor.*

SIXTH DISTRICT

To the House of Delegates:

No district meeting was held this year due to the fact that there were no particular problems of major importance which made such a meeting necessary or advisable.

Most of the men have returned from service and in many locations there have been additions to the membership.

The work of the Veterans Administration and the activities of Kansas Physicians' Service have been under way and have been very actively supported as far as our information goes.

In the Sixth District the Tri-County Medical Society, of which Cowley and Sumner counties are members, has been revived and is active at this time.

The other county societies have been quite active and interest over the district is commendably high.

Respectfully submitted,

Warren F. Bernstorf, M.D., *Councilor.*

SEVENTH DISTRICT

To the House of Delegates:

In the annual report for 1947 there is little of news in the Seventh District. Since the Veterans Administration and the Kansas Physicians' Service programs are in operation, there seems to be little of interest to report. However, I am making a brief report of the individual counties.

Clay County—As usual it has 100 per cent membership in the Society. There have been no deaths or retirements in the past year. This group has always been active, holding good and interesting meetings each month.

Cloud County—Has 16 physicians, with all but one belonging to the Society. They had one death during the past year, A. M. Townsdin, M.D. Ellis Starr, M.D., retired and moved to Denver, Colorado. The Society is active, holding regular meetings in conjunction with meetings with the staff of St. Joseph hospital, and usually arranges outstanding programs.

Jewell County—Has eight physicians, of whom six belong and two do not belong to the Society. They have had no deaths or retirements in the past year. The Society has attended meetings on invitation at Concordia and Beloit, and members speak highly of such meetings.

Mitchell County—Has nine physicians and 100 per cent membership. Martha Modston, M.D., retired and moved to Topeka in the past year. The Society holds regular meetings. At four or five of the meetings each year the programs are given largely by outside medical talent. It is an active society.

Republic County—Has nine physicians, one of whom is not a member of the Society. They had a 32-bed hospital erected in 1946, occupied in early December. The hospital was built by P. L. Beiderwell, M.D., and will naturally help greatly in the hospital situation in that community. The Society is quite active, holding regular monthly meetings.

Riley County—Has 24 physicians with 100 per cent membership. There have been no deaths or retirements in the past year. Meetings are not regular, but occur approx-

imately once a month, and most of the professional papers are given at the monthly staff meetings of St. Mary's hospital, which are usually interesting.

Washington County—Has eight physicians of whom seven belong to the Society. There have been no deaths or retirements in the past year. The Society has more or less regular meetings.

Respectfully submitted,
R. R. Cave, M.D., *Councilor.*

EIGHTH DISTRICT

To the House of Delegates:

There is much activity throughout the Eighth District regarding new hospital construction and additions to old hospitals. Here in Ellsworth the American Legion has offered to promote a drive for sufficient funds to buld a 30-bed addition to the Ellsworth hospital as a veterans' memorial, providing the present stockholders will allow the institution to be placed on a non-profit basis. The annual stockholders' meeting will be held in April when a decision will be arrived at.

I have visited a number of local medical society meetings. They were well attended and had good programs. Unfavorable weather prevented my going as much as I would have liked.

The return of so many young doctors from the service has very materially relieved the pressure on the physicians who have been much over-taxed during the past four or five years.

Kansas Physicians' Service is due for congratulations on the splendid record made in 1946.

I hope the recent change in the Veterans Administration agreement with physicians of the Kansas Medical Society will prove satisfactory.

It has been a pleasure to have served as your councilor during the past year.

Respectfully submitted,
B. H. Mayer, M.D., *Councilor.*

NINTH DISTRICT

To the House of Delegates:

In the Ninth District the outlook for medical care in the future is very good. The matter of hospitalization, which has been such a great problem in the past, seems now on its way to a solution.

Oakley, Sharon Springs, Norton and Atwood all have plans or are formulating plans to build new hospitals. A new 30-bed hospital has just been completed in St. Francis. Goodland and Colby have, under construction, additions to their present hospitals. Quinter also has a program planned to increase its present facilities. In each instance the programs seem to be adequate for the needs of the respective communities. These projects all spell better medical care for Northwest Kansas.

The doctors in this district have manifested much interest in local meetings and have cooperated with the state program for improvement of medical care.

There have been no deaths in the profession in Northwest Kansas during the past year. Our ranks have been augmented by the addition of two very capable men. Dr. A. C. Cooper, formerly of Logan, is now located at Norton. Dr. Rodney Jones, formerly affiliated with the University of Colorado Medical School in Denver and a veteran of four years service in the U. S. Army Medical Corps, is now located in Goodland.

Respectfully submitted,
Haddon Peck, M.D., *Councilor.*

TENTH DISTRICT

To the House of Delegates:

The past year has again been one in which there have been too few physicians for the demands of the public for medical care. We have been blessed with a few colleagues who have returned from military service, but many communities continue to have sub-standard medical care due to physician shortage.

In some of these communities there is a tendency for cultist activities and these have not been discouraged by recent medical legislation.

At Hays the prospects of additional hospital beds in the near future offer some added feeling of patient security. Added facilities, more particularly for the treatment of poliomyelitis, will also be of considerable benefit in this and in adjacent communities.

We also hope by the end of this year to have an accredited cancer diagnostic clinic in operation. This, we feel, will give the entire cancer program in this section an added stimulus to cooperate with us in the study and financing of this problem.

The scientific and educational programs for physicians sponsored by the state society have been well received and well attended by members in this section. Attendance has been limited chiefly by the responsibilities of practice which have kept many from attending these sessions.

The fact that some of the physicians in this councilor district belong to different medical societies increases the problem of getting all the men in the district together at the same time to visit with this councilor. As a result, most discussions and decisions are made by members in this district attending the Central Kansas Society meetings.

At present most of us are looking forward to attending the state meeting in May.

Respectfully submitted,
Murray C. Eddy, M.D., *Councilor.*

ELEVENTH DISTRICT

To the House of Delegates:

This has been a busy year, but the load has been somewhat lightened by the return from service of Dr. M. E. Christmann and Dr. Francis A. Thorpe, both of Pratt.

Pratt hopes to have a new hospital started in the not too distant future. Our county society is again starting to function after a period of inactivity during the past emergency.

Dr. E. P. Deal, formerly of Dighton, has located in Greensburg, replacing Dr. C. D. Updegraff, who has retired. Dr. M. O. Marchard has located at Kinsley, but has not been present at any of our Society meetings. Pratt county has no new doctors. Dr. James C. Williams, who located here early in the year, moved to Florida after a month's practice, to join a clinic there.

The sick of this district have been well cared for during the past year.

Respectfully submitted,
J. R. Campbell, M.D., *Councilor*

TWELFTH DISTRICT

To the House of Delegates:

Nothing sensational has taken place in this district during the past year. All of the doctors have returned from government service, and we have several new doctors who have come into this district in the past year. We wish to take this opportunity to welcome them.

We have attempted to organize a Twelfth Councilor Medical Society. However, it has been rather inactive.

We have had two meetings, one at Dodge City and one in Garden City, and both were well attended. About the only excuse we have for not having more meetings is that the doctors are too busy, the people have too much money, and we have given too much consideration to finance and not enough to the scientific side of the practice of medicine.

G. R. Hastings, M.D., *Councilor*

Committee Reports

ALLIED GROUPS

L. B. Gloyne, Chr., Kansas City; G. R. Combs, Leavenworth; I. E. Hempstid, Hutchinson; A. E. Hiebert, Wichita; G. E. Milbank, Wichita; H. C. Sartorius, Garden City; W. L. Speer, Osawatomie.

To the House of Delegates:

The Committee on Allied Groups did not hold a meeting during the year because no problem was presented to the chairman which seemed of sufficient importance to call the committee.

One conference with the executive secretary was held and a number of problems were discussed, none of which seemed to need committee action.

Respectfully submitted,

L. B. Gloyne, M.D., *Chairman*

ANESTHESIOLOGY

P. H. Lorhan, Chr., Kansas City; C. A. Boyd, Hutchinson; H. J. Brown, Winfield, R. S. McKee, Leavenworth; C. D. McKeown, Wichita; F. C. Taggart, Topeka.

To the House of Delegates:

This is the first year that a Committee on Anesthesiology has functioned within the Kansas State Medical Society. Three meetings were held by the committee during the past year at the following cities, Wichita, Topeka and Kansas City, Kansas.

The committee presented an adjusted fee schedule to Kansas Physicians' Service and the Veterans Service to compensate the physician-anesthesiologist for the service he renders to the community and the medical profession.

Your committee in conjunction with the University of Kansas Hospitals, Department of Anesthesiology, has prepared an exhibit for the state meeting to illustrate the correlation of a department of anesthesia with the other medical specialties.

Furthermore, your committee has been of great assistance in securing a postgraduate anesthesia course to be presented on September 9, 10, 11, 1947, at the University of Kansas Hospitals.

At present, we are working on the problem of setting up an Anesthesia Study Commission whose principal function shall be the keeping of records on the number of surgical deaths that occur throughout the state. It is hoped that this commission shall be able to have sent to it a report from all the hospitals in the state and study the cases. It is the wish of your committee on anesthesiology that the House of Delegates will seriously consider this problem. The initial spade work is being done but we are not prepared at this time to set up a definite program.

The committee is desirous of acquainting the various hospitals throughout the state with the desirability of having a professional anesthetist in their community since the last meeting of the House of Delegates of the A. M. A. has defined anesthesiology as the practice of medicine.

Your present committee sincerely hopes that in the very near future the House of Delegates shall make the Committee on Anesthesiology a permanent one as there is still a great amount of work to be done in this specialty.

Respectfully submitted,

Paul H. Lorhan, M.D., *Chairman*

AUXILIARY

C. O. West, Chr., Kansas City; E. H. Decker, Topeka; H. A. Hope, Hunter; E. J. Nodurfth, Wichita; H. L. Regier, Kansas City.

To the House of Delegates:

The Auxiliary Advisory Committee of the Kansas Medical Society is happy to report that there has been a very active Auxiliary group during the past year. At the beginning of the year they selected the slogan "Forward Auxiliary" and this they have done in a spirit of friendliness and cooperation.

Many new Auxiliaries have been organized; the membership has increased markedly and the new organizations are active and enthusiastic.

For the first time in several years the Auxiliary is represented on the National Board, by Mrs. Leo Schaefer of Salina. This is indeed a step forward for the Auxiliary. Through her efforts, 160 members have subscribed to the National Auxiliary Bulletin.

Hygeia is being read by more people in Kansas than ever before.

The Legislative and Public Relations Committee has been especially active under the chairmanship of Mrs. D. N. Medearis of Kansas City. She has spoken before many lay groups on socialized medicine and has organized many public relations teas over the state, all being well attended. The Auxiliary Advisory Committee is proud of her work and commends her as a speaker to lay groups.

The Auxiliary is very grateful to the Kansas Medical Society for printing their own Auxiliary publication. It has been a great help to the Auxiliary in giving valuable information to the physicians' wives of Kansas through its columns.

The Auxiliary has been indeed fortunate to have as their president the past year Mrs. H. L. Regier, a leader of great insight and organizing ability, and an untiring leader. Her year has been most successful and I am sure that under such leadership the Auxiliary of the Kansas Medical Society will go forward.

Respectfully submitted,

C. Omer West, M.D., *Chairman*

CHILD WELFARE

D. N. Medearis, Chr., Kansas City; P. E. Belknap, Topeka; P. C. Carson, Wichita; L. E. Eckles, Topeka; R. C. Fredeen, Kansas City; Fred Mayes, Topeka; F. L. Menehan, Wichita; Herbert Miller, Kansas City; E. G. Padfield, Salina; J. A. Wheeler, Newton.

To the House of Delegates:

Two meetings of the Committee on Child Welfare were held during the past year. During the first meeting various subjects were discussed with the view of determining which should become projects of the committee. Several state and national child welfare programs were considered but definite recommendations were postponed. Continued co-operation with the E.M.I.C. program was considered but not voted upon because factors beyond the control of this committee had not yet been resolved. The study of child health services undertaken by the American Academy of Pediatrics was also discussed, but action was deferred until this study could be completed.

Approval was given for a wider distribution of the quarantine regulations set up by the State Board of Health and for a proposed postgraduate course in pediatrics at the University of Kansas School of Medicine. It was also recommended that the faculty in pediatrics be made available to the county societies for scientific programs throughout the year.

A subcommittee was asked to prepare a statement reminding mothers of the value of immunizations against smallpox, diphtheria, pertussis and tetanus. It was recommended that this statement be printed by the State Board of Health and mailed to each mother with the birth certificate. This project has been completed and the forms have been prepared and are now accompanying birth certificates when sent out through the Board of Health.

A subcommittee was appointed to make recommendations regarding desired changes in the Kansas Crippled Children law. Early in January the subcommittee reported back and the Committee on Child Welfare asked approval of the Council to continue the study on four specific points. The committee recommended (1) That a statement be prepared to define the term "handicapped child"; (2) That provision be made for a suitably trained medical administrator of crippled children activities in Kansas; (3) That a technical advisory committee consisting of consultants in the various relevant medical specialties and general practice who are members of the Kansas Medical Society be appointed to assist in the operation of the crippled children law; (4) That hospital fees be made on an actual cost basis.

These recommendations were considered by the Council at its meeting in January, at which time the Committee on Child Welfare was authorized to continue the study on these points at a later date and, when completed, to submit the report once more for final approval by the Council. The Committee on Child Welfare is now continuing with this subject.

Respectfully submitted,

D. N. Medearis, M.D., *Chairman.*

CONSERVATION OF EYESIGHT

R. E. Cheney, Chr., Salina; J. A. Billingsley, Kansas City; G. F. Gsell, Wichita; J. G. Janney, Dodge City; H. L. Kirkpatrick, Topeka; D. D. Vermillion, Goodland; W. W. Reed, Topeka.

To the House of Delegates:

No meeting of the Committee on Conservation of Eyesight was held during the past year as no problems of sufficient importance to call a meeting were brought to the attention of the chairman.

Respectfully submitted,

R. E. Cheney, M.D., *Chairman.*

CONSERVATION OF HEARING

H. W. Powers, Chr., Topeka; T. D. Blasdel, Parsons; E. D. Carter, Wichita; J. H. Enns, Newton; P. A. Petitt, Paola; C. T. Ralls, Winfield; L. B. Spake, Kansas City.

To the House of Delegates:

The Committee on Conservation of Hearing held no meetings this year as no matters necessitating committee action were presented to the chairman.

Respectfully submitted,

H. W. Powers, M.D., *Chairman*

CONSTITUTION AND RULES

A. W. Fegtly, Chr., Wichita; F. R. Croson, Clay Center; H. E. Haskins, Kingman; G. I. Thacher, Waterville; J. L. Wentworth, Arkansas City.

To the House of Delegates:

The Committee on Constitution and Rules has agreed by correspondence to present the following three amendments to the By-Laws.

1. By-Laws, Chapter X—Editorial Board—Section 7

The section now reads—"Funds of the Journal and other publications shall be accounted in separate ledgers, and shall preferably be maintained in separate banking institutions. Bills for expenditures authorized by the Editorial Board and approved by the chairman of the Board shall be paid by vouchers signed by the Treasurer and countersigned by the President and Secretary. Surplus funds may be accrued at the end of the fiscal year to reserve accounts within limits established by the House of Delegates or the Council."

This section shall be amended to read: "Funds of the Journal, and other publications shall be accounted in separate ledgers, and shall preferably be maintained in separate banking institutions. Bills for expenditures authorized by the Editorial Board and approved by the chairman of the Board shall be paid by vouchers signed by the Chairman of the Board and countersigned by either the managing editor or the business manager of the Journal of the Kansas Medical Society. The Chairman of the Board, the managing editor and the business manager shall be individually bonded for sums not less than $5,000.00. Certification of all vouchers written shall be mailed not less frequently than once each month to the president, the secretary and the treasurer of the Kansas Medical Society. Surplus funds may be accrued at the end of the fiscal year to reserve accounts within limits established by the House of Delegates or the Council."

2. By-Laws, Chapter V.—House of Delegates—Section 1

The section now reads: "The House of Delegates shall meet on the first and last days of each annual session. It may adjourn from time to time as may be necessary to complete its business; *Provided* that its hours shall conflict as little as possible with the general or sectional meetings." The section shall be amended to read: "The House of Delegates shall have two distinct meetings during each annual session, either of which may be adjourned from time to time as may be necessary for the completion of its business. The time and place for each shall be determined by the Committee on Arrangements at such hours as to conflict as little as possible with the general or scientific meetings.

"Special or intermediate meetings may be called at the discretion of the Council. Notice of such meeting shall be mailed to each component society at least thirty days in advance of the date selected. Delegates shall be selected by the component societies in the manner provided for annual sessions."

3. By-Laws, Chapter V—House of Delegates—Section 17

The original section was amended by the House of Delegates, May 11, 1944 and now reads: "Representatives to the House of Delegates of the American Medical Association shall be certified to each annual meeting of that body according to the Constitution and By-Laws of that association, and shall be selected in the following manner: One-half the number of delegates permitted this society for two year terms of office shall be selected annually as Delegates-Elect, whose terms of office shall begin with the annual session of the American Medical Association of the year succeeding their election."

The section shall be amended by the addition of the following clause:

"No member may be elected to serve more than three consecutive two year terms as delegate to the American Medical Association."

These amendments are to be read at the first meeting of the House of Delegates and your committee recommends their adoption by proper vote at the last meeting of the 1947 session.

Respectfully submitted,

A. W. Fegtly, M.D., *Chairman*

CONTROL OF CANCER

H. E. Snyder, Chr., Winfield; L. G. Allen, Kansas City; J. P. Berger, Wichita; J. D. Clark, Wichita; O. R. Clark, Topeka; C. A. Hellwig, Wichita; D. A. Kendall, Great Bend; C. H. Miller, Parsons; H. F. O'Donnell, Wichita; J. M. Porter, Concordia; R. H. Riedel, Topeka; K. E. Voldeng, Wellington.

To the House of Delegates:

Your Committee on Control of Cancer has launched a program, the success of which depends upon your cooperation. Public interest and contributions to the Kansas Division of the American Cancer Society have demanded an energetic program directed toward the cancer problem. The Kansas State Board of Health has established a division of Cancer Control with Dr. Robert H. Riedel as director. Dr. Riedel and Dr. Beelman, his chief, have been most cooperative in the program of your committee. The Kansas Division of the American Cancer Society has been most generous in backing financially all projects needing such support. The Committee on Graduate Study of the Kansas Medical Society and the Extension Division of the University of Kansas have been most cooperative in the program of professional education.

In answer to the cry for cancer detection clinics, the committee reached the conclusion that the best answer to the problem of cancer detection was to establish a cancer detection unit in every doctor's office. To promote this program and to standardize the type of examination made, a form for history and physical examination was prepared by the Committee on Control of Cancer, approved by the Council of the Kansas Medical Society, and then printed and distributed by the Kansas Division of the American Cancer Society to all members of the Kansas Medical Society. The doctor is requested to send the bottom part of each completed blank to the offices of the Kansas Division of the American Cancer Society in Topeka. It is hoped that these blanks will be widely used and that a large number may be accumulated during the coming year for statistical studies concerning the merit of the periodic health examination in the detection of pre-cancerous or early cancerous lesions.

A program for the establishment of Diagnostic Tumor Clinics in all hospitals in Kansas which have met the satndardization requirements of the American College of Surgeons has been launched. Letters have been written to each of these hospitals outlining minimum standards for such Diagnostic Clinics set by the Committee on Control of Cancer. The Kansas Division of the American Cancer Society has offered to pay $500 to each of these clinics meeting the minimum standards after they have been in operation for two months. It is hoped that money will be available to contribute annually to the support of these clinics. In the first two months, at least six of these clinics were organized and in operation, and steps leading to the organization of such clinics have been taken in eight or ten other hospitals.

The establishment of Diagnostic Tumor Clinics in Kansas hospitals is closely correlated with the program of the State Board of Health in developing a cancer registry. Dr. Riedel, of the State Board of Health, hopes to have the same group of hospitals in which diagnostic clinics may be organized contribute reports through the cancer registry. To this end he has supplied cancer record forms for making such reports, and in addition has agreed to supply all hospitals establishing Diagnostic Tumor Clinics with the standard malignancy record forms of the American College of Surgeons. It is planned to pay each hospital cooperating in this program to help defray the clerical expense involved. Hospitals will be paid on the basis of number of cases reported and upon the completeness of the study and records in each case.

Minimum standards for treatment clinics or centers have been set as those of the American College of Surgeons for Treatment Tumor Clinics. The Kansas Division of the American Cancer Society has agreed to contribute to hospitals augmenting or developing treatment facilities to the extent of the availability of funds. Your committee has written to county medical societies in several sections of the state suggesting that personnel and facilities for a Treatment Tumor Clinic should be available in those areas, and has further told these county societies that they would recommend to the cancer society that financial aid be given those areas that proceed with the organization of Treatment Tumor Clinics.

A full day postgraduate course on cancer was presented in Topeka, Salina, Hays, Wichita and Parsons in March. The Kansas Division of the American Cancer Society contributed $1000 for this program. A refresher course in cancer and radiology will be given at the University of Kansas in May. This three-day course will be available to approximately 80 doctors and $3000 has been budgeted by the cancer society for its support.

A sub-committee on exhibits headed by Dr. Karl Voldeng of Wellington has prepared a series of exhibits, papers, and motion pictures on the subject of "Cancer of the Colon and Rectum." A great deal of time and some money furnished by the cancer society have been expended in the preparation of this program. It is to be available for use in county medical society meetings, and is so designed that it can be presented by members of each society. The premiere of this program is to be held at the Butler County Medical Society meeting in El Dorado on April 14, 1947, The expense of the preparation of this exhibit and of its transportation will be borne by the Kansas Division of the American Cancer Society.

Your committee has prepared a series of one-page articles on cancer to appear monthly in the Journal of the Kansas Medical Society throughout the year 1947. Upon the recommendation of the committee, the Kansas Division of the American Cancer Society will distribute copies of the Illinois Cancer Bulletin to all physicians in Kansas. Distribution of this bulletin will begin in April or May and will continue at intervals of two weeks for six months. This bulletin was prepared by the Committee on Cancer of the Illinois Medical Society, edited by Dr. Andrew C. Ivy, and is a most excellent presentation on the subject of "Early Diagnosis of Cancer."

Arrangements have been made for speakers at the annual meeting of the Kansas Medical Society on the subject of cancer.

Your committee has urged the cooperation of all physicians with the Field Army of the Kansas Division of the American Cancer Society in their program of lay education. This most important part of the program of cancer control is being promoted and carried out by the women who have served so faithfully in the Field Army.

The program as outlined is a big one. It needs the support of every member of the Kansas Medical Society. With the cooperation of all much can be accomplished in Kansas.

Respectfully submitted,
Howard E. Snyder, M.D., *Chairman.*

CONTROL OF TUBERCULOSIS

F. A. Trump, Chr., Ottawa; A. L. Ashmore, Wichita; C. E. Coburn, Kansas City; C. H. Lerrigo, Topeka; G. D. Marshall, Colby; R. R. Snook, Manhattan; C. F. Taylor, Norton; Carl J. Wilen, Manhattan.

To the House of Delegates:

A meeting of the Committee on Control of Tuberculosis was held at the Jayhawk Hotel in Topeka on December 8, 1946. All members but two were present.

The first item on the agenda was the problems at the state sanatoria. Dr. Taylor reported that there were only four doctors including himself to care for 400 beds. The average should be one doctor for each 60 beds. In order to secure additional staff members new cottages are being built for living quarters for doctors and their families. Also increases in salaries have been authorized.

There was considerable discussion of the possibility of extending the University of Kansas residencies in internal medicine to include a period at Norton. A motion was finally proposed and carried that this committee express itself in favor of residencies for physicians in training in the control of tuberculosis at Norton, that a committee be appointed for further action and that the requirements of the American Board be met in most instances.

Dr. Taylor also reported on the work at Hillcrest. From July 1, 1945, to July 1, 1946, 998 patients were "processed." This institution is being used as a sorting clinic for difficult cases and for emergencies. About 30 per cent of cases have been returned home with a diagnosis of no tuberculosis.

The subject of the need for more clinical material for teaching at the University of Kansas Medical School was thoroughly discussed. A motion was passed that this committee recommend to the Council of the Kansas Medical Society, for recommendation to the Board of Regents, that a chair for the teaching of diseases of the chest be established at the University of Kansas Medical School on the campus at Kansas City, Kansas. Also that a 100-bed hospital be built to house this section.

Dr. Joliet reported on the program of mass x-ray surveys by the State Board of Health. An additional unit is being purchased but cannot be put into operation without more money being appropriated. His office is far behind on reports, due to the fact that he cannot secure sufficient clerical help.

A motion was passed providing that a fee of $3.00 be recommended by this committee as the standard fee for the first 14x17 chest film re-take in connection with the photofluorographic survey when the fee is paid by the Tuberculosis Association.

Respectfully submitted,
Frank A. Trump, M.D., *Chairman*

ENDOWMENT

L. S. Nelson, Chr., Salina; W. P. Callahan, Wichita; J. H. A. Peck, St. Francis.

To the House of Delegates:

Although this committee has not had a formal meeting, several possibilities on this subject have been discussed with members of the committee, who beg to submit the following recommendations:

It appears advisable that the Kansas Medical Society establish a worthwhile project to be supported through endowments made voluntarily by members, and that such projects be inaugurated as rapidly as possible after having received approval from the House of Delegates.

The committee suggests that an annual lecture might be presented, perhaps in connection with the annual session of the Kansas Medical Society or perhaps at the School of Medicine, commemorating some outstanding Kansas physician or a noteworthy contribution of the Society itself, such as the services rendered by medical officers from Kansas during World War II. Funds for defraying expenses of this lectureship could be provided from income of an endowment created for this purpose.

It is further suggested that an annual award might be established, the money to be derived through an endowment, providing recognition for an outstanding Kansas physician who has made distinct contributions in the field of medicine. It is suggested that this award may be presented by the House of Delegates at the annual session of the Kansas Medical Society.

A long-range program might be planned and, should money remain from the postgraduate education fund, this might be transferred to the permanent project. Should this be acceptable, it is recommended that future committees, with the approval of the House of Delegates, determine the disbursement of income derived from such endowments, either as loans to needy medical students, as scholarships, or for graduate education for the benefit of Kansas physicians.

A fund could be established in honor of some Kansas doctor or event in the history of Kansas medicine, the proceeds of which might assist young doctors who are willing to locate in areas needing additional medical care.

It was felt by this committee that anything beyond recommendations to the House of Delegates would be exceeding the authority delegated to it. The committee therefore respectfully recommends to the House of Delegates any or all of the above projects and recommends further that, should these be adopted, the House of Delegates provide means for completing details of an endowment program and that the entire membership of the Society be advised of the program and invited to participate by making contributions to the endowment fund.

The committee will welcome suggestions concerning the best method of raising money for an endowment fund. Although it may require several years to acquire a sufficient sum, plans may be made and a worthy project can be selected.

Respectfully submitted,
L. S. Nelson, M.D., *Chairman.*

EXPERT TESTIMONY

C. E. Joss, Chr., Topeka; E. J. Frost, Wichita; J. W. Spearing, Columbus; E. M. Sutton, Salina; J. B. Weaver, Kansas City.

To the House of Delegates:

It has not been necessary for the Committee on Expert Testimony to hold a formal meeting during the past year. A printed announcement of the services this committee is prepared to give has been mailed to each lawyer in the state and to the judges of all district courts in Kansas. This committee received an encouraging amount of favorable comment following the distribution of this material and is of the opinion that the organization of a Committee on Expert Testimony has been welcomed by the legal profession and by the Kansas State Bar Association.

After several years of planning, the committee is now

ready to serve when called upon. Although the program is in operation, it was set up to function only when requested to do so. Since no requests have been received up to the present, there has been no need to call the committee for a meeting.

Respectfully submitted,

C. E. Joss, M.D., *Chairman*

HOSPITAL SURVEY

A. R. Hatcher, Chr., Wellington; P. L. Beiderwell, Belleville; F. C. Beelman, Topeka; Athol Cochran, Pratt; L. C. Edmonds, Horton; O. W. Longwood, Stafford; M. F. Russell, Great Bend.

To the House of Delegates:

There has been no formal meeting of this committee during the past year because conditions regarding hospital development in Kansas have not been sufficiently stabilized to give the committee anything to do. This, therefore, will of necessity be an interim report, considering primarily the activities of the Kansas State Hospital Advisory Commission, of which your chairman is a member. Activities of the commission have regularly been reported to the officers and the council of the Kansas Medical Society. As soon as definite plans are completed for hospital construction in Kansas, a meeting of the Committee on Hospital Survey will be called to obtain active medical society participation in the program.

It will be recalled that the Hill-Burton bill or, more properly, the Hospital Construction act, became federal law in August, 1946. If and when appropriations are made according to this act, it appears that Kansas will receive approximately $900,000 a year for five years to assist communities in hospital construction. According to provisions in the act, federal participation can never exceed one-third the total building cost but may be less than that amount.

Also under provisions of this act, before any state may receive a federal grant for hospital construction, a state survey of existing hospital facilities, together with an outline of locations needing additional hospital beds, must be made and submitted to Washington. This was anticipated more than a year ago, at which time the governor appointed what is known as the Kansas State Hospital Advisory Commission. This commission consists of one hospital representative, one architect, one nurse, one business man and one doctor, who at present is chairman of the commission. The executive director of the State Board of Health is an ex officio member of the commission. The State Board of Health has completed its survey of existing hospital facilities but has not yet agreed upon a plan for evaluating needs for additional hospitals.

On a national scale this program will be administered through the United States Public Health Service with the guidance of a federal advisory commission. Tentative regulations have already been mailed to each state and, as is frequently the case in federal programs, some of the regulations are not easily adaptable to the situation in Kansas. At least two, however, are mandatory and must be complied with before Kansas will be eligible for federal support under this program.

The first is that a state agency must be officially designated to distribute the Kansas allotment equitably within the state. The second is that a standard hospital licensing act must be in effect within the state. At the time this is written both of these problems are being discussed by the 1947 Kansas legislature. It appears likely that the Kansas State Board of Health will be designated the official agency and that an advisory commission will be set up to handle the details of this project. It also appears that a standard hospital licensing act will be passed. This also will create another state commission whose function will be to investigate and license hospitals within the state. At the time of the meeting of the House of Delegates this situation will be known and this will be more completely reported.

As soon as Kansas has complied with federal regulations and when the advisory commission has indicated at least in outline a state plan for the approval of local projects, the Hospital Survey Committee will be fully advised of all action and will then be requested to make specific recommendations to the commission.

Respectfully submitted,

A. R. Hatcher, M.D., *Chairman.*

INDUSTRIAL MEDICINE

C. R. Rombold, Chr., Wichita; J. L. Beaver, Wichita; C. H. Benage, Pittsburg; C. E. Boudreau, El Dorado; F. E. Coffey, Hays; C. W. Hall, Hutchinson; J. W. Spearing, Columbus; Director of Industrial Hygiene, State Board of Health, Topeka.

To the House of Delegates:

Plans have been made to hold in each of the industrial cities in the state a meeting of the representatives of industry, labor, and medicine for the encouragement of the establishment of industrial health programs in larger industries in the state. These meetings are to be held at approximately the time of the state medical meeting, and the speaker is to address the Kansas Medical Society on industrial health.

Charles Rombold, M.D., *Chairman*

LEGAL MEDICINE

E. L. Vermillion, Chr., Salina; G. E. Brethour, Dwight; C. C. Hawke, Winfield; W. A. Smiley, Junction City.

To the House of Delegates:

The Committee on Legal Medicine did not hold a meeting during the past year as no matters of importance came to the attention of the chairman. The Committee on Expert Testimony is now handling a great part of the work which formerly fell to the Committee on Legal Medicine, and all matters pertaining to the latter group were disposed of through correspondence during the past year.

Respectfully submitted,

E. L. Vermillion, M.D., *Chairman.*

MATERNAL WELFARE

Porter Brown, Chr., Salina; S. H. Boyd, Topeka; L. A. Calkins, Kansas City; P. R. Ensign, Topeka; H. M. Floersch, Kansas City; R. E. Pfuetze, Topeka; R. A. Schwegler, Lawrence; R. A. West, Wichita.

To the House of Delegates:

This committee wishes, first, to call the attention of the Kansas Medical Society to the maternal mortality record of 1.4 per 1000 during the year of 1946. This is the lowest record in the history of the state and places Kansas where it is not impossible for her to reach the top of the list of the most progressive states in this field. However, we wish to point out that further advancement will be slow and almost impossible if wider interest cannot be aroused. We must have help in finding the woman who will be a casualty in 1947.

As effort is being made by the executive office to solicit the interest and the assistance of the state superintendent of public instruction, Dr. L. W. Brooks, in order to get this matter before the public school system. The

executive office is also communicating with the dean of women at Emporia Teachers College and with Miss Georgiana Smurthwaite of Kansas State College to enlist their aid and to ask for suggestions as to how this project may be introduced into colleges. These two schools were chosen as an experiment. If they are interested, other state schools will be approached.

County medical societies are urged to use their influence with their local press in presenting this vital information concerning standards and possible improvement of them.

The committee strongly recommends the continuation of an effort begun last year to make Mother's Day in churches and clubs Maternal Welfare Day. Articles are being prepared for a number of women's magazines, church publications, etc., which will present both the problem and some simple suggestions as to its solution. Thus far the committee has received only encouragement from church authorities and editors in this project.

The committee plans to conduct a scientific exhibit at the next annual meeting in Topeka.

Appreciation to the Kansas Board of Health was expressed for its careful and fair management of the EMIC Program. The committee also expressed complete confidence and willingness to cooperate with any program which the Board approves.

The possibility of the increase of venereal infections among mothers was considered and the committee felt impelled to ask every individual physician to be alert in its recognition.

The congenital defects in infancy produced by communicable diseases in the prospective mother presented almost a new problem. Since the establishment of cataract and heart disease originating from German measles in the mother during gestation, some alarming cases have been recognized. Now that deafness is also considered to fall in that category, the committee wishes to again urge every physician to report communicable disease during gestation through the proper channels in order to aid your committee in getting material for further study.

Respectfully submitted,

Porter Brown, M.D., *Chairman*

MEDICAL ASSISTANTS

C. O. Merideth, Jr., Chr., Emporia; C. V. Black, Pratt; G. A Chickering, Hutchinson; H. J. Davis, Topeka; W. J. Feehan, Kansas City; R. H. Maxwell, Wichita.

To the House of Delegates:

Members of the Committee on Medical Assistants held one meeting during the past year, a joint session with the officers and councilors of the Kansas Medical Assistants' Society at Topeka on September 1, 1946. At other times during the year the committee functioned by correspondence.

An increased membership was set as the goal for the year, and almost every county society has reported more members than formerly. In addition, one new organization was formed, the Labette County Medical Assistants' Society, and several others may be formed later as the result of work begun this year.

The financial condition of the group is markedly improved this year since the organization received a subsidy of $150 from the Kansas Medical Society for furthering its work. Annual dues, formerly 50 cents per person, were raised to one dollar, effective January 1, 1947.

A plan for a series of sectional clinics in different parts of the state was tentatively outlined at the September meeting and a test clinic was held at Emporia on January 19, 1947, with members of the Lyon county group as hostesses. Assistants from nine different cities attended and took part in the discussions, and members of the Lyon County Medical Society gave splendid support. The day's program included several addresses, a round table discussion, a business meeting for officers and councilors, a luncheon, and a tea at the home of Dr. and Mrs. C. O. Merideth, Jr. The clinic achieved its purpose, to bring about a better understanding of mutual problems of assistants and the doctors who employ them, and it has been recommended that a program of such clinics be inaugurated as soon as the new officers assemble to plan the new year's activities.

The annual meeting of the Kansas Medical Assistants' Society is to be held at Topeka on May 11 and 12, immediately preceding the annual meeting of the Kansas Medical Society. The program, printed elsewhere in this issue of the Journal, will be of interest and value to all assistants.

Your committee feels that members of the organization are genuinely interested in improving their services to the doctors of Kansas, and we believe that they should have the support of every physician. Information on the formation of new groups, objectives for the year, and ways in which physicians can further the work of the organization will be furnished on request.

Respectfully submitted,

C. O. Merideth, Jr., M.D., *Chairman*

MEDICAL ECONOMICS

J. W. Randell, Chr., Marysville; W. C. Bartlett, Wichita; H. E. Blasdel, Hutchinson; H. O. Bullock, Independence; R. M. Carr, Junction City; G. E. Kassebaum, El Dorado; H. S. O'Donnell, Ellsworth.

To the House of Delegates:

Medical economics differs very little from any other type of economics. In this case it pertains to the practice of medicine, and in order for medical economics of the state of Kansas to be on a substantial footing we must make use of standard business principles. Medical economics is primarily an individual problem, and after that it is an organizational one. In this report we shall discuss this subject along these general lines, emphasizing some of the things we can do as individuals and some of the things we can do as the Kansas Medical Society.

1. It is important to obtain a good medical education. After interne and residency service, the doctor should become actively affiliated with medical societies. Only by reading a liberal supply of essential medical journals, attending clinics and postgraduate courses, and by constant study will the doctor be able to practice better medicine.

2. It is important to keep adequate case histories and financial records. It is equally important to send your statements to the patient regularly. We have always had to contend with the patient who moves from doctor to doctor, never attempting to pay any of them. By making use of your local credit agency, you may be protected against this type of patient. In an exchange of the names of delinquents, few doctors will turn in complete lists. Often some patients will not pay one doctor while they may pay another. Some education is needed to get the patient in the habit of paying his doctor regularly. For the most part, office practice should be on a cash basis.

3. It is important to take an active part in community affairs, attend and support a church, a social club, the Chamber of Commerce.

4. It is important to keep your office, automobile, and person basically clean and neat.

5. It is important to make conservative investments during the productive years.

From an organization standpoint we will offer you the following items for consideration.

1. Pre-school Immunization. Some county societies have arrangements whereby the county commissioners pay for immunization of pre-school age children. This program has practically eliminated small pox and diphtheria in Kansas. The money thus obtained goes into the county society treasury where it can be spent on meals, dues, and scientific meetings.

2. Old-age Assistance and Under Privileged Cases. Some counties, Marshall for one, have a suitable working contract with their local social welfare boards to take care of those patients needing medical assistance. Some counties, Brown for one, use the unit system in taking care of the county poor or under privileged. Shawnee county also has an interesting plan in operation. These methods are managed by and under the control of the local medical society. The secretaries of these societies will be able to give you any information you desire.

3. Kansas High School Athletic Association. It is felt that possibly Kansas Physicians' Service and Blue Cross could insure these athletes against any possible injuries. It is felt that this could be worked out to better advantage for all concerned than under its present set-up.

4. The committee would like to recommend that Kansas Physicians' Service and the care of veterans by private doctors be more thoroughly explained to the House of Delegates so that the delegate in turn could pass this information on to his local society. Kansas Physicians' Service at present pays for no x-ray therapy. There are numerous conditions where x-ray therapy may be used. If patients choose surgery, the policy covers it, but if x-ray therapy is chosen, and usually at less cost than surgery, the patient does not have coverage.

5. Shortage of Hospital Beds. Insurance companies should be prevailed upon to change their policies, thereby not requiring the patient to be hospitalized before benefits would be provided. The fact that the policy will often provide for the payment of x-ray and other laboratory work only if the patient is hospitalized has added an extra burden on hospital space.

6. Blood Bank and Plasma. It is recommended in counties where practical that the Red Cross establish a blood bank. The committee lastly recommends the continuation of the present program of blood plasma.

Respectfully submitted,

J. W. Randell, M.D., *Chairman*

MEDICAL HISTORY

J. M. Porter, Chr., Concordia; G. M. Gray, Kansas City; J. F. Gsell, Wichita; C. S. Huffman, Columbus; W. L. Warriner, Topeka.

To the House of Delegates:

The Committee on Medical History has had no formal meetings and has proceeded rather leisurely by mail, as befits such a subject as medical history. Work on several projects has begun and a few objectives have been reached.

In December, 1946, with the help of Oliver Ebel, material was prepared for the AMA radio broadcast on early medicine in Kansas and Oklahoma. The subject presented was the life and work of Dr. Samuel J. Crumbine. The Oklahoma Medical Society furnished Dr. Moorman as the speaker to complete this program.

A file on past officers of the Society with pictures and short biographical notes which had been started in the central office has been taken over by the committee and should prove of value as it is completed. Arrangements are being made with the Kansas Historical Society in Topeka to make photostatic copies of the older records of the various county societies. On some occasions these invaluable papers have disappeared, due to changes in the secretaries, deaths and carelessness. Certain records of the Procurement and Assignment Service are being examined with a view to preserve these for their future historical value.

The committee has accomplished little of permanent value but has begun some projects which it is hoped will justify its existence at a later date.

Respectfully submitted,

J. M. Porter, M.D., *Chairman*

MEDICAL SCHOOLS

R. G. Ball, Chr., Manhattan; D. M. Diefendorf, Waterville; L. G. H. Lewis, McPherson; F. J. McEwen, Wichita; M. B. Miller, Topeka; A. A. Sprong, Sterling.

To the House of Delegates:

Last year your Committee on Medical Schools reached agreement on all points regarding plans for organization of a graduate school of medicine in connection with the University of Kansas School of Medicine.

This year the successful completion of many of the plans was effected.

Although a meeting of all members of the committee at the medical school was not accomplished, the chairman met with Dean H. R. Wahl and further study was made of the graduate education problem, and careful consideration was given to methods of obtaining mutual benefits and cooperation between the University of Kansas Medical School and the Kansas Medical Society.

A list of the members of the faculty of the School of Medicine who might be available for talks to the various medical organizations, with the titles of their papers, was obtained and will be sent to the secretary of each county society. It is requested that one month's notice be given the desired speakers and that all expenses to and from the meeting be borne by the host medical group. All requests for speakers may be made by secretaries of local medical societies to Dean H. R. Wahl, University of Kansas School of Medicine.

During the past year through direction of the Veterans Administration hospitals in Excelsior Springs, Missouri, and in Wichita, Kansas, a real increase in approved residency training has been made available by the University of Kansas School of Medicine.

The desire to be of service to the medical profession of the state of Kansas has been repeatedly expressed by many faculty members of the School of Medicine this year. Dean Wahl has requested that a list of speakers made up from the ranks of practicing physicians in the state be made available to the university in order that some of these men may be given an opportunity to appear before the students and faculty members.

Respectfully submitted,

Ralph G. Ball, M.D., *Chairman*

NECROLOGY

A. R. Chambers, Chr., Iola; J. T. Naramore, Larned; A. L. Hilbig, Liberal.

To the House of Delegates:

We, your committee, submit the following list of members of the Kansas Medical Society whose deaths have been

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reported since the last meeting of the House of Delegates:

Name	Age	Date 1946	Residence
Dr. Richard S. Pickler	61	Feb. 23	Beloit
Dr. Arthur J. Lind	66	Mar. 2	Kansas City
Dr. Charles R. Townsend	75	Apr. 4	Centralia
Dr. Harve M. Stricklen	65	Apr. 5	Arkansas City
Dr. Thomas P. Haslam	62	Apr. 15	Council Grove
Dr. Clemons C. Lewis	68	Apr. 25	Clifton
Dr. Henry C. Ulery	71	Apr. 25	Girard
Dr. Charles M. Stemen	80	May 29	Kansas City
Dr. Robert L. Moberly	74	May 11	Olathe
Dr. Asa M. Townsdin	66	July 9	Jamestown
Dr. William A. Heap	58	July 11	Mulvane
Dr. Marion Trueheart	65	July 11	Sterling
Dr. Oliver W. Ellison	74	July 12	Independence
Dr. Henry M. Stewart	74	Aug. 15	Hutchinson
Dr. Frank E. Coffey	55	Aug. 28	Hays
Dr. Florence P. S. Chapman	69	Sept. 10	Topeka
Dr. Arthur E. Hertzler	76	Sept. 12	Halstead
Dr. John B. Davis	77	Oct. 2	Ottawa
Dr. George V. Allen	74	Oct. 19	Topeka
Dr. Lester L. Williams	51	Nov. 4	El Dorado
Dr. Henry W. West	90	Nov. 15	Yates Center
Dr. Robert L. Lee	43	Nov. 28	Kansas City
Dr. Henry G. Snyder	66	Dec. 21	Seneca
Dr. Arthur R. Dildine	69	Dec. 26	Cheney

Name	Age	Date 1947	Residence
Dr. Alden L. Crittenden	63	Jan. 20	Wichita
Dr. James D. Reid	65	Jan. 27	Wellsville
Dr. James Moore	77	Feb. 6	Spring Hill
Dr. Charles S. Campbell	68	Feb. 8	Coffeyville
Dr. Herbert R. Goshorn	70	Feb. 11	Chanute
Dr. Elliott T. Heckart	64	Feb. 13	Topeka
Dr. Lewis M. Schrader	67	Feb. 18	Kinsley
Dr. William S. Lindsay	94	Feb. 20	Topeka
Dr. William S. Gooch	72	Feb. 21	Fort Scott
Dr. David C. Stahlman	80	Mar. 6	Potwin
Dr. David J. Moore	85	Mar. 10	Dexter
Dr. Horace C. Embry	68	Mar. 13	Great Bend
Dr. Clyde Dale Blake	69	Mar. 30	Hays

Respectfully submitted,

A. R. Chambers, M.D, *Chairman.*

PHARMACY

W. L. Anderson, Chr., Atchison; C. M. Alderson, Dodge City; G. B. Athy, Columbus; E. R. Hill, Lyons; R. T. Nichols, Hiawatha.

To the House of Delegates:

During the year prior to this your Committee on Pharmacy had a meeting with the board of directors of the Kansas Pharmaceutical Association. The result of this conference was reported to the House of Delegates a year ago. The activities of your committee during the present year consisted of attempting to carry into action some of the plans that were made at that meeting. Subcommittees have met frequently with subcommittees of the pharmaceutical association and report that progress is being made in a number of directions.

The problem regarding narcotics prescriptions has been considerably improved. There is still some complaint regarding telephone prescriptions which doctors neglect to send to pharmacists. The committee respectfully requests that some announcement be made to the physicians of Kansas urging their cooperation in getting all prescriptions to the pharmacist as early as possible.

One of the major activities during the past year has been to assist the Kansas Pharmaceutical Association in perfecting an agreement with the Veterans Administration regarding prescriptions. The pharmaceutical association made all arrangements with the Veterans Administration but the Kansas Medical Society, through this committee, cooperated with the program to the extent that there is now a regulation in the program governing pharmacists and in the agreement of the medical society with the Veterans Administration that wherever a registered pharmacist is located within the city where the physician treating a veteran practices, then the physician shall not be authorized to issue drugs in the treatment of that veteran. In other words, all prescriptions required in the care of veterans will be sent to pharmacists cooperating in the program unless there is no pharmacist located in the city where the treatment is rendered.

Respectfully submitted,

W. L. Anderson, M.D., *Chairman.*

PLASMA

H. S. Blake, Chr., Topeka; W. F. Bernstorf, Winfield; J. A. Grove, Newton; H. O. Loyd, Arkansas City.

To the House of Delegates:

A meeting was held in Wichita on November 24, 1946, by the Plasma Committee. The committee made the following recommendations:

(1) That the Council either act on its own behalf or that the Council authorize the Committee on Plasma to institute an inquiry to the county medical societies requesting an opinion regarding whether the Board of Health should process and distribute plasma.

(2) That the Council request the Committee on Plasma to prepare information on plasma, its uses, etc., and to disseminate this information to the membership through county medical societies, and that this committee be empowered to ask the cooperation of the State Board of Health in the preparation of this material.

(3) That the Council direct the Committee on Plasma to set up minimum standards covering various phases of this program.

It was felt that it would be desirable to prepare a plasma exhibit for the State Medical meeting in May, 1947.

These recommendations were put before the Council some time in December, 1946, and the Council felt that nothing should be done until an inquiry was sent to the county medical societies. This inquiry was made the early part of February, 1947, and the number of replies have been so inadequate that no deductions have been made up to the present time.

Respectfully submitted,

Henry S. Blake, M.D., *Chairman.*

POSTGRADUATE STUDY

H. H. Jones, Chr., Winfield; F. C. Beelman, Topeka; E. L. Mills, Wichita; W. M. Mills, Topeka; Maurice Snyder, Salina.

To the House of Delegates:

From January 1, 1946, to January 1, 1947, 59 requests were handled, with a total of $11,875.

Three cases were handled in January of 1947 with a total of $750.

The largest number of requests came during the spring and summer of 1946. It is anticipated that there will be a gradual lessening in the number of requests during the year 1947, but that these requests will continue for one to two years, as younger service men have opportunities for graduate study open to them.

Letters of appreciation from the recipients of these grants from the Kansas Medical Society have continued to be uniformly praiseworthy of the gestures made by this Society,

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and from outside the state praise has come from the service men and from teachers. Opinion has been expressed by medical educators in the midwest that the Kansas Medical Society should continue a long-range program in postgraduate study, making it available for all members of the organization.

Respectfully submitted,
Harold H. Jones, M.D., *Chairman.*

PUBLIC HEALTH AND EDUCATION

L. W. Reynolds, Chr., Hays; D. D. Carr, Topeka; J. L. Lattimore, Topeka; O. C. McCandless, Marion; C. H. Munger, Emporia; W. L. Pratt, Leavenworth; C. E. Robison, Hoisington; G. J. Thacher, Waterville; R. W. Urie, Parsons; K. E. Voldeng, Wellington; J. E. Wolfe, Wichita.

To the House of Delegates:

This committee has been in contact with the Kansas State Board of Health and has reviewed publications of the Board for the past year.

The news released regarding public health matters in the state of Kansas has been given out through the State Board of Health. Dr. Floyd Beelman, secretary of the Kansas State Board of Health, has been of great assistance to the committee in taking care of detail work.

The committee would suggest the adoption of some form of news release service which could be located in the office of the executive secretary of the Kansas Medical Society. News concerning the public health work of the Kansas Medical Society could be given to press reporters. This office, of necessity, would have to be in Topeka that these news releases would be correlated with those given by the Kansas State Board of Health.

Respectfully submitted,
L. W. Reynolds, M.D., *Chairman.*

RURAL HEALTH

C. M. Barnes, Chr., Seneca; S. A. Anderson, Clay Center; L. E. Beal, Fredonia; R. M. Daugherty, Meade; J. T. Fowler, Osawatomie; A. J. Horejsi, Ellsworth; H. M. Swaney, Goodland.

To the House of Delegates:

The chairman of your Committee on Rural Health attended the National Rural Health Conference in Chicago on February 7 and 8. Everyone talked straight from the shoulder and at times spades were not only called spades but also shovels. This was no doctors' meeting. True, the conference was sponsored by the American Medical Association. True, there were doctors present, as were delegates and representatives of the state medical societies. But true also was the fact that representatives of farm unions and cooperatives and various women's clubs and auxiliaries were present, and many interesting addresses were presented by these lay people.

Some of the addresses dealt with hospital facilities for rural areas, methods of bringing and holding doctors in rural areas, voluntary medical and hospital prepayment plans, rural nursing needs, and medical care for the lower income groups.

This meeting should prove to be an eye-opener for all doctors, for the rural layman, judging from his expression at this conference, is not happy with present rural health conditions. The rural layman feels that the doctors are not trying to improve rural health. He feels that doctors are more interested in securing "an easy way of life" and in eliminating competition in the field of the healing arts than they are in scientific progress and the improvement of rural health.

We doctors must admit that the present trend of medical education has been, more or less, to accentuate the specialties in medical practice. We must admit, also, that perhaps little effort has been made to "sell" medical students and even prospective medical students on rural practice. However, all the accusations leveled at doctors were not justified and probably arose through misunderstandings. Dr. H. H. Shoulders, president of the American Medical Association, in the final address of the session, did a very efficient "low pressure" job of dispelling the doubts concerning doctors' attitudes about country practice.

At the conclusion of the conference, Albert Goss, master of the National Grange, proposed that a National Council on Rural Health be formed to act on the recommendations presented at the conference. This proposal is now being studied by the American Medical Association Board of Trustees and representatives of participating farm groups.

Many medical society representatives agreed that relief of the rural doctor shortage problem could at least partially be obtained by having young medical graduates spend three to five years in general practice before beginning their residencies for specialties. This plan would not only broaden the young doctor's clinical knowledge, and give him a better understanding of the difficulties encountered in general practice, but would also give him experience concerning medical economics.

When we realize that from 4½ million farmers there has sprung 80 per cent of the population of our large cities, during the past three decades, we can easily see that if the farmer is not more healthy, then our entire national health will decay. When one realizes further that a democratic type of life must necessitate good health for its survival—then we do truly see the importance of this rural health program.

An outline for the improvement of rural health, both from the standpoint of the community's responsibility and the doctor's responsibility will appear in the report of the Kansas Medical Society's Rural Health Committee. This will appear preceding or during the annual meeting of the Kansas Medical Society.

Respectfully submitted,
Conrad M. Barnes, M.D., *Chairman.*

SCIENTIFIC WORK

R. I. Canuteson, Chr., Lawrence; C. W. Erickson, Pittsburg; Irene Koeneke, Halstead; R. R. Melton, Marion; Frances Schiltz, Wichita; C. C. Underwood, Emporia; H. R. Wahl, Kansas City.

To the House of Delegates:

Although the committee has not had a meeting during the past year, some thought has been given to projects that might be adopted. It is respectfully recommended to the House of Delegates that the Committee on Scientific Work during the following year explore the possibilities of setting up a roster of qualified speakers who would be available to address county societies and, secondly, to explore the possibilities of establishing an annual award for outstanding scientific work done in Kansas.

Respectfully submitted,
R. I. Canuteson, M.D., *Chairman.*

STORMONT MEDICAL LIBRARY

D. C. Wakeman, Chr., Topeka; A. J. Brier, Topeka; H. J. Williams, Osage City.

To the House of Delegates:

One meeting of the Committee on Stormont Medical Library was held during the past year at the library in its new quarters in the south wing of the state house. A num-

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ber of matters were discussed, discarding outmoded volumes, selecting which periodicals which should be received, and suggesting medical books which might be purchased.

Miss Louise McNeal, state librarian, reported that it had been mentioned to her that the Stormont library might be moved to quarters allocated to the Kansas State Board of Health when the new state office building is constructed, thereby concentrating all offices pertaining to health in one location. The matter was discussed by the committee but no action was taken. Miss McNeal also reported that she would ask the 1947 legislature for the sum of $1,000 per year for the purchase of new medical books. It is now known that approximately that amount will be available from funds allocated by the legislature for library expenditures.

Since the meeting of the committee, a suggestion has been made on which no action has been taken. It is included here for the purpose of introducing the subject to the House of Delegates for consideration and possible action. The Kansas Medical Society receives approximately 100 scientific publications. Many of these are journals of other state medical societies, various publications of the American Medical Association, and about 15 foreign publications. It has been customary for some years past to send all of these journals to the library of the medical school at the University of Kansas. Now, since Stormont Medical Library has a full-time librarian and adequate space, and since many of these journals would be subscribed for at considerable expense, and since the University of Kansas medical library could probably receive them through reciprocity without cost, the question is raised whether the House of Delegates would recommend either that the journals continue to be sent to the University of Kansas library or that all publications received in the Society office be given to Stormont library in the future.

Respectfully submitted,
Don C. Wakeman, M.D., *Chairman.*

STUDY OF HEART DISEASE

P. W. Morgan, Chr., Emporia; W. H. Algie, Kansas City; P. M. Clark, Independence; G. F. Corrigan, Wichita; T. T. Holt, Wichita; E. D. Liddy, Jr., Lawrence; F. J. McEwen, Wichita; H. T. Morris, Topeka; L. O. E. Peckenschneider, Halstead; Maurice Snyder, Salina; D. C. Wakeman, Topeka.

To the House of Delegates:

The Committee for the Study of Heart Disease had one regular meeting. Objectives set forth include:

1. Cooperate with the activities of the American Heart Association.
2. Stimulate and assist group and individual study of cardiovascular subjects among the members of the Kansas Medical Society.
3. Offer assistance to those with previous special training in cardiovascular diseases by acting as a medium of contact.
4. Cooperate with the tuberculosis survey section of the State Board of Health.

A circular to men previously interested in the committee's work got a poor response. Dr. S. A. Levine who before the war was to have come to Kansas to conduct a refresher course, because of the war was unable to do so. He was approached on the matter this year but again was unable to come to Kansas. Another prominent teacher was invited but could not accept for 1946 or 1947.

The committee received full cooperation from the Kansas State Board of Health in its follow-up of chest x-rays when cardiopathy exists. In the follow-up the committee hopes to gain valuable information and in return has offered to assist the Board of Health and physicians of the state by dictating notes to the physicians concerned as to what each cardiac silhouette suggests. This is a big and promising project for all concerned.

The effects of the American Heart Association have received little help from the Kansas group in the past year, but at the annual Kansas Medical Society meeting in May it is hoped that the A.H.A. program can be explained and hence wide professional and later lay participation will be realized.

Respectfully submitted,
Philip W. Morgan, M.D., *Chairman.*

VENEREAL DISEASE

D. E. Bux, Chr., Columbus; J. P. Berger, Wichita; G. W. Cramer, Parsons; E. J. Haerle, Minneapolis; B. M. Marshall, Topeka; J. C. Mitchell, Salina; W. N. Mundell, Hutchinson; Director of Venereal Disease Control, State Board of Health, Topeka.

To the House of Delegates:

The Committee on Venereal Disease has been active throughout the year. A meeting was held in Wichita on November 24, 1946, with the following members present: Dr. Donald E. Bux, Dr. Guy Cramer, Dr. W. N. Mundell, Dr. Glen H. Baird, Mr. Oliver Ebel. Dr. Charles A. Hunter, director of Public Health Laboratories, Kansas State Board of Health, was also present.

Dr. Baird, director of the Division of Venereal Disease Control of the Kansas State Board of Health, has greatly assisted the committee by furnishing material and statistics on venereal disease control. The committee considered the following:

1. Legislation on prenatal examinations
2. Premarital legislation
3. Rapid treatment of syphilis
4. Postgraduate education for doctors
5. Scientific articles on venereal disease for the Journal.

The committee has also made recommendations to the Council in regard to the approval of laboratories in the state of Kansas.

The committee is working on an exhibit for the meeting of the Kansas Medical Society in May, 1947.

Respectfully submitted,
Donald E. Bux, M.D., *Chairman.*

VETERANS ADMINISTRATION AFFAIRS

W. M. Mills, Chr., Topeka; W. P. Callahan, Wichita; B. I. Krehbiel, Topeka; E. A. McClintock, Topeka; L. S. Nelson, Salina; C. B. Trees, Topeka.

To the House of Delegates:

The agreement between the Kansas Medical Society and the Veterans Administration has been in operation one year as of April 1, and in that length of time has become one of the major activities. Pioneering in this field, the Kansas Medical Society has achieved nationwide recognition and has regularly received requests from many parts of the country for information regarding the "Kansas plan."

There are today almost 1,200 Kansas physicians participating in this program. Each doctor applying to perform services under the agreement has been individually approved by the councilor of his district, whose judgment has frequently been guided by a committee. Although accurate statistics are not immediately available, during the course of the past year there have been approximately 2,250 examinations made by fee designated physicians of Kansas to assist the Veterans Administration in determin-



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ing compensation for veterans. During the same period 2,500 treatment cases have been authorized and cared for outside Veterans Administration hospitals.

The program has not always operated without difficulty, but except for disturbances that would normally be expected in any undertaking of this magnitude and involving so many persons, it appears that the Kansas plan has been operating to the satisfaction of the Veterans Administration, the veteran and the medical society. Your Committee on Veterans Administration Affairs has worked diligently, meeting each week to discuss specific problems that arose. The many letters mailed to doctors from this committee, in which a request was made to complete the medical examination blank, have been sent in an efort to make all examinations acceptable to the rating boards. The cooperation of the doctors in Kansas has been splendid and is sincerely appreciated.

In behalf of the committee I wish also to extend gratitude to Dr. E. H. Gibbons, medical coordinator for the Veterans Administration, and to Dr. O'Brien, who have performed many services to the doctors of this state, to Dr. Lowry and Dr. Beasley and others from the branch office in St. Louis for the splendid cooperation they have given us at all times, and Dr. Hawley and Dr. Harding in Washington for their leadership and direction, without which a program such as ours would never have been possible.

Respectfully submitted,

W. M. Mills, M.D., *Chairman.*

CLASSIFIED ADVERTISEMENTS

CRUTCHES with tips, $2.25 pair postpaid. Braces made repaired, altered. Prompt service. BOSWORTH BRACE SHOP, 416 N. Water, Wichita, Kansas.

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DOCTOR RETIRING—Desires to sell equipment and practice. Write the Journal 6-47.

LABORATORY POSITION WANTED—Experienced technician available March 15. Hospital work preferred. B.A. in biology, University of Oregon. Qualifications and complete information on request. Write the Journal 3-47.

FOR SALE—Office Equipment. Also practice of deceased physician in good town in eastern part of the state. Write the Journal 7-47.

FOR SALE—Medical and office equipment of deceased physician, good medical library, sectional bookcases, heat lamps, violet ray, surgical instruments; everything necessary to continue old and well-established doctor's office. Moderately priced. Building for rent; bachelor apartment in rear. For appointment write the Journal 8-47.

SITUATION WANTED—Work in library, medical, scientific, research. Experience in all lines. Kansas and other references. Write the Journal 9-47.

ANNOUNCEMENTS

April 21-24—Refresher Course in Obstetrics and Gynecology, Sponsored by University of Kansas School of Medicine, Kansas Medical Society, Kansas State Board of Health. Send Registration Cards and Inquiries to University Extension Division, University of Kansas, Lawrence. Course offered at School of Medicine, Kansas City, Kansas.

April 26-May 4—Conclave of Professional Personnel in Industrial Health Work, Hotel Statler, Buffalo, New York.

April 28-May 2—Annual Session, American College of Physicians, Chicago, Illinois.

May 5-8—Mississippi Valley Sectional Instructional Course in Allergy, Sponsored by American College of Allergists, at University of Kansas Hospitals, Kansas City, Kansas. Applications and Hotel Reservations through Chairman of Program Committee, Orval R. Withers, M.D., 1418 Bryant Building, Kansas City 6, Missouri.

MAY 12-15—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, TOPEKA, KANSAS.

May 20-22—Refresher Course, Nursing Education, University of Kansas School of Medicine, Kansas City, Kansas.

May 26-28—Refresher Course, Radiology and Cancer, University of Kansas School of Medicine, Kansas City, Kansas.

May 26—Refresher Course in Laboratory Procedures, Hotel Lassen, Wichita, Kansas. For Laboratory Technicians, Bacteriologists and Clinical Pathologists.

May 27-28—Meeting, Kansas Public Health Association, Wichita, Kansas.

May 31-June 8—Refresher Course, Psychosomatic Medicine, Offered in Five Different Centers of the State by the University of Kansas School of Medicine, Kansas City, Kansas.

June 5-8—13th Annual Meeting, American College of Chest Physicians, Ambassador Hotel, Atlantic City, New Jersey. Scientific program and examinations for fellowship.

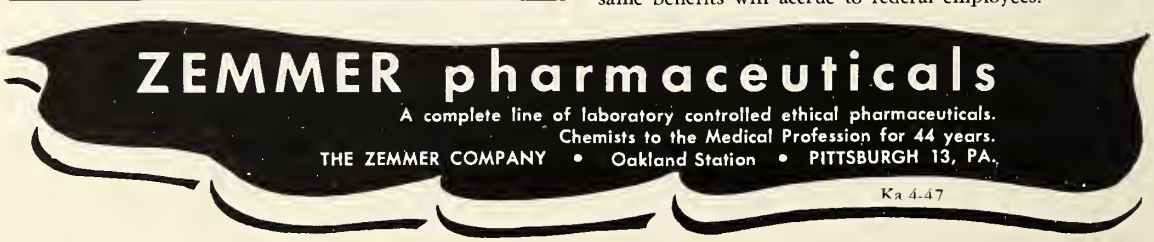
June 9-13—Centennial Session, American Medical Association, Atlantic City, New Jersey.

September 3-6—25th Annual Scientific and Clinical Session, American Congress of Physical Medicine, Hotel Radisson, Minneapolis, Minnesota. Address American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

Federal Employee Health Division

A new division, the Federal Employee Health Division, was recently created within the Bureau of Medical Services of the United States Public Health Service with Dr. John W. Cronin in charge. It will function to develop standards and policies for health programs, conduct studies and prepare analyses of employee health programs, provide consultative services to the heads of departments and agencies of the federal government, review and appraise employee health programs already under way, and contract with departments and agencies for the operation of such programs.

For many years the U.S.P.H.S. has made studies of specific industrial and occupational hazards and has furnished professional advice upon request to private industry. Many industrial and commercial organizations have found that employee health programs have paid dividends in increased efficiency and productivity, and it is anticipated that the same benefits will accrue to federal employees.



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THE SURGICAL TREATMENT OF PILONIDAL CYSTS AND SINUSES

Frederic B. Emery, M.D.
Seneca, Kansas

These are epithelial-lined cysts or sinuses of congenital origin occurring in the skin overlying the sacrococcygeal region, superficial to the bone, and in, or adjacent to, the midline. The term "pilonidal" refers to the nests or strands of hair, typical of the condition, found within the cyst in about half the cases. Other synonymous designations include sacrococcygeal sinus and cyst, sacrococcygeal dermoid, cyst teratoma and traction dermoid.

ETIOLOGY

The etiology of this condition is unknown. It is generally agreed, however, that it is a manifestation of faulty embryologic development and present at birth, but there is great diversity of opinion among authors as to its mode of origin and the embryonic tissues concerned. Bacon[2] lists twenty-one theories which have been advanced, only a few of which are of more than historical interest.

Perhaps the earliest description of this condition was that given by Warren[75] in 1867. He postulated later, in explanation of its development, a change in polarity in the growth of hair in this region, growing inward beneath the skin to form a cyst. Later investigators, notably Tourneaux and Herrmann[73] in 1887 and Mallory[44] in 1892, proposed the theory that coccygeal vestiges of the medullary tube were the anlage responsible for subsequent development of these cysts. Indeed, the latter was able to demonstrate these vestiges in human embryos by means of serial sections. Considerable support is given to this theory by such rare cases as reported by Moise[48] and also by Ripley and Thompson[58] in which a connection existing between a pilonidal cyst and the neural canal was the source of fatal meningitis. Shenkin et. al.[65] recently presented a case of meningitis in which there was a communication between a pilonidal cyst and a patent and dilated filum terminale, which in turn was in continuity with the central canal of the spinal cord.

Lannelongue[41] in 1882 advanced the theory of ectodermal invagination, and his views are held by many today. In an elaborate study of human embryos, Fox[26] has concluded that the structures forming pilonidal sinuses have their origin in ectodermal invaginations from the skin surface during the third and fourth months of embryonic life. Stone[69] in 1931 proposed the interesting theory that pilonidal cysts are analagous to the preen gland in birds. This is a special scent gland which becomes active at the time of sexual maturity and bears many resemblances to pilonidal cyst in man.

Kooistra[37] found evidence in extensive studies of the human embryo to support both the neurogenic and the ectodermal invagination theories of origin, so from these findings no conclusive opinion seems justifiable at the present time.

INCIDENCE

Pilonidal cysts and sinuses occur in males about three or four times as often as in females.[52] Though encountered at all ages, they are most frequently found in young adults, particularly between the ages of 15 and 25, and in the hypertrichitic. The condition has a predilection for the Caucasian race, occurring but rarely in the negroid race. Paradoxically, the condition is more common in negro females than in negro males.[33] The Mongolian race has always been considered free from this disease. It is said by some[33] to show a definite familial tendency. Fox[27] presented a case occurring in twins and cites two previous reports from the literature.

PATHOLOGY

Grossly the condition is seen in the form of sacrococcygeal dimples, sinuses, cysts, and those rare cysts which connect with the sacral canal and with the subarachnoid space or central canal of the cord.

Dimples are found in about 25 per cent of infants at birth and four per cent of adults.[11] They are merely small depressions or conical pits in the skin,

and being shallow they never become infected and therefore remain symptom free.

Pilonidal sinuses usually extend from a small midline aperture at or near the sacrococcygeal articulation, coursing cephalad in the subcutaneous tissues toward the sacrum and ending blindly or in a cyst cavity. Frequently a small tuft of hair projects from the sinus opening. The sinus is lined by stratified squamous epithelium with slight cornification. Because of its depth and proximity to the anus, it is subject to infection by various bacteria, particularly staphylococci or B. Coli, which find the products of dermal activity accumulated within the sinus an excellent culture medium. Following infection, the formation of additional sinuses lined by chronic granulation tissue and opening lateral to the midline is not unusual, due to the burrowing nature of the infection.

Cyst cavities occur commonly in association with one or more sinus openings, though they are occasionally encountered without a visible opening or with a mere depression present in the over-lying skin. They are lined by stratified cuboidal epithelium and frequently contain hair and epithelial detritus. Though most writers believe that hair found in these cystic cavities is a product of the cyst itself, Granet and Ferguson[29] state they have never observed hair follicle formation in the cyst wall nor hair in a cyst which has no sinus communication with the skin. Furthermore the hair when present was always found lying free in the cavity. From these observations, they conclude that hair enters the cyst through its sinus and is broken off inside. Histologically the cyst wall consists of dense fibrous tissue with round cell infiltration. Like pilonidal sinuses, the cysts are subject to infection and abscess formation. Lateral extensions are probably the result of burrowing infection, and following inflammation the lining epithelium is often partially or totally destroyed.

SYMPTOMS

Usually a pilonidal cyst or sinus causes no symptoms until it becomes infected. Acute abscess formation is accompanied by symptoms of local pain and tenderness, and possibly by constitutional disturbances such as fever, chills, headache and malaise. Often a history is obtained of some irritation or trauma, such as prolonged sitting, riding, falling, etc., which precedes onset of symptoms. A chronically infected cyst or sinus may be accompanied by an irritating mucopurulent discharge which stains the underclothing and produces a sensation of moisture. There may be slight local discomfort and tenderness. Frequently the patient gives a history of recurring pilonidal abscesses.

DIAGNOSIS

The diagnosis of pilonidal sinus is based on the presence of a small, skin-lined orifice in the midline of the sacrococcygeal region, often with a protruding tuft of hair, which leads to a sinus extending upward toward the sacrum. There is perhaps a small amount of mucopurulent material expressible from the orifice. The cyst can sometimes be palpated beneath the skin. Local redness, heat, swelling and fluctuation are physical findings of acute pilonidal abscess. Other conditions entering into the differential diagnosis include: furuncle, sebaceous cyst, lipoma, fibroma, anal fistula, osteomyelitis, tuberculosis, syphilis and actinomycosis.

TREATMENT

Much of what we have learned regarding the treatment of pilonidal cysts and sinuses has been gained through experiences of various surgeons during the last war. Though the disease has long been recognized, little attention was paid to it as recently as two decades ago.[9] Indeed, an article by Stone[70] in 1924 reporting sixty cases was greeted with a great deal of skepticism, even by a number of well-known and experienced surgeons, who frankly admitted they knew little or nothing about this condition prior to Stone's report. Admissions to civilian hospitals for treatment of pilonidal cysts and sinuses before the war constituted but a small percentage of the total surgical admissions. Most men advocated the method of block excision with open packing of the wound, allowing it to heal by granulation.

Attention was focused on pilonidal disease by the high incidence and consequent large number of sick days occasioned by this condition during the first few years of the war. It was found present in a considerable percentage of inductees, due to the age group, and the vigorous physical training and trauma incident to service caused many cases to become symptomatic that under different circumstances would probably have remained quiescent. The term "jeep disease" was coined because of the common history of difficulties starting after a rough ride in a jeep. In the Army during the first two years of the war more sick days were lost for the treatment of this condition than for any other remedial defect[15], while in the Navy during the year 1940 the sick days for pilonidal disease exceeded the total for either hernia or syphilis.[40] Granet and Ferguson[29] state that a total of 47,010 hospital sick days were lost in the Navy and Marine Corps during the war because of pilonidal disease. At first most asymptomatic pilonidal sinuses, cysts, and even dimples were operated, on the assumption that under combat conditions they would become symptomatic. However, this was soon stopped when it became evident that too many sick days were being lost on this account, and thereafter only those cases in which pilonidal

disease was seriously interfering with proper performance of duty were recommended for surgical correction.

The aims of treatment are somewhat different in the military service. Here it is essential to get the patient back to duty as soon as possible, and it is not feasible to send a man into combat with a granulating wound. With this in mind, attempts were begun to devise methods minimizing hospitalization yet resulting in a firm, stable scar. Various reports on partial and primary closure techniques began to appear in the literature in the fall of 1942, and since that time numerous methods have been described. Unfortunately many military surgeons were unable to follow their cases carefully after hospital discharge, and therefore a great deal of interesting and valuable statistical data is lacking in their reports.

In the presentation of treatment which follows, a general discussion of the various methods, both surgical and non-operative, will be given, together with the merits and disadvantages of each. Then the various techniques will be outlined in a little more detail and statistical data relative to the results obtained through use of each method given, where available.

NON-OPERATIVE METHODS

Before taking up the discussion of surgical methods of treatment, some mention should be made of non-operative procedures which have been advanced and acclaimed quite enthusiastically by their proponents. While not endorsed by the majority of physicians as being curative measures, there is a place for this type of therapy, particularly in the patient who absolutely refuses to undergo a surgical operation.

Caustics: Caustics of various sorts have been advocated as a means of destroying the cyst lining. Perhaps the most popular method is that described by Cutler and Zollinger.[21] The cyst and any lateral extensions are first incised and packed open for two or three days with iodiform gauze. The pack is then removed and 2 per cent butyn applied to the wound for anesthesia. The surrounding skin is protected with vaseline or zinc oxide ointment and the wound filled with a modified Carnoy's solution, which is allowed to remain five or ten minutes. The excess is removed and an iodiform gauze pack replaced. Such treatments are repeated every three or four days until the wound is completely healed. Occasionally light curettage may be necessary. The method is said to be painless and to lend itself to the treatment of even the most extensive and complicated sinus. Infection is checked or entirely eliminated after the first few applications of the solution, and there is a gradual increased freedom from odor and discharge. Block and Greene[4] report 11 cases entirely healed in from four to eleven weeks. The average number of treatments was 16.2 in this group. Silverman[68] has treated four cases of recurrent pilonidal sinus successfully using Carnoy's solution, but failed in one case of primary pilonidal sinus.

Knowlton[36] cites four cases treated with repeated injections of 10 per cent sodium morrhuate, all of which are apparently cured.

Crookall[20] employs powdered silver nitrate as a caustic. The cyst is first partially unroofed and hair and detritus removed, following which the cavity is packed with powdered silver nitrate. The surrounding skin is protected with vaseline gauze and a dry dressing applied. In from three to five days the entire lining membrane can be removed from the sinus, leaving smooth, healthy tissue to granulate.

X-ray: Sher[66] has reported good results obtained from X-ray therapy. A dose of 80 Roentgen units, using 140 K.V.P. and a 3 mm. aluminum filter, is given every three or four days for a total of eight treatments. This course of treatment may be repeated within a month, if it is felt that improvement warrants further attempt at complete cure. The author advocates routine treatment of all pilonidal sinuses for a period of about thirty days, stating "some will heal completely and in others there will be considerable subsidence of the inflammatory process, leaving a cleaner and more definitely circumscribed area, should future operation become necessary." Best results were obtained in cases where there had been no frank abscess formation, or only one episode of acute infection, although recurrences following operation and sinuses infected over a long period of time have been treated successfully.

OPERATIVE METHODS

These fall into three general groups: (1) open packing, (2) partial closure, and (3) primary closure.

(1) *Open packing:* This procedure has been in the past the one advocated most widely, and probably is still the most popular method, especially in civilian practice. Kleckner[35] in 1936 canvassed the members of the American Proctologic Society, and his returns indicated that 87 per cent of these men with wide experience preferred the open method. However in recent years, particularly since the war, the trend has been toward partial or primary closure of more wounds. It is generally agreed that the open method offers the greatest number of permanent cures. In brief it consists of simple or en bloc excision of the cyst or sinus and open packing of the wound, allowing it to heal by granulation. The chief disadvantage in this form of treatment is the prolonged healing time. For the wound to heal completely by granulation requires on an average about

eight weeks. This means a great deal of time spent by both doctor and patient in re-dressings, which must be frequent in order to insure proper healing. In civilian practice this is not too serious a handicap, since dressings after the first few days are usually not painful, and the patient is able to return to most forms of employment with the open wound in comparative comfort. However, in the military service this prolonged healing time is a very serious disadvantage. The rigors of the service demand a healed wound before the patient is returned to duty.

Another disadvantage claimed by some is that the scar resulting is wide and is more likely to become tender and disrupt under conditions of repeated trauma than is one resulting from successful primary closure. This was a common observation in the military service during the last war.

Despite these criticisms, the method has distinct advantages. As pointed out before, it has been proved to result in fewer recurrences than any other procedure yet devised. It is especially applicable in the treatment of wounds too wide to close primarily without undue tension. Too, it is a recommended procedure in instances where there is a question as to the complete removal of all involved tissues and in wounds known or suspected to be infected. It may be employed with reasonable safety in the presence of considerable inflammation, though it is not a substitute for incision and drainage of pilonidal abscesses. Since healing is by secondary intention, patients are generally ambulatory and leave the hospital sooner than those in which primary healing is the goal.

The marsupialization operation, as performed by Buie[9] and others, may be considered a modification of the open method. It is claimed by its advocates to partially correct some of the disadvantages of the ordinary method. The principle underlying the procedure is that the cyst lining is epithelial and if exposed to the surface will lose its secretory function and take on the nature of true skin. Convalescence is said to be shorter because of conservation of tissue, and a natural pad over the sacrum is left which is less likely to result in a tender scar. Buie states recurrences are not observed when this is the original operation. There is no need for unusual preoperative preparation or for postoperative special diets, discouragement of bowel action, etc. Patients are said to experience little postoperative discomfort and are ambulatory early. Van Dyke[74] incises pilonidal abscesses the full length of the cavity and keeps them packed open, which is in effect a marsupializing operation, and is often able to effect a cure without further procedures.

(2) *Partial closure:* This method is an attempt to reduce healing time by incomplete closure of the wound, leaving less to heal by granulation, at the same time preserving the advantages of draining. The usual procedure is to approximate the subcutaneous tissues by means of tension sutures and to allow the skin to remain unapproximated. Another method falling into the category of partial closure involves union of the skin edges to the postsacral fascia, as advocated by MacFee.[43] When successful, healing is said to be nearly as rapid as in primary closure. The method is recommended when the wound is too large to close primarily without tension, or when there is a history of recent infection.

Many report a high incidence of wound infection and failures using this type of closure. The same precautions to prevent postoperative wound infection must be observed as when primary suture is employed. MacFee's method is criticized on the grounds that tissues are approximated in an unanatomical relationship and the sacrum left without an adequate protective padding.

(3) *Primary closure:* Methods of primary closure varying from simple reapproximation of the wound in layers to complicated and ingenious plastic procedures of various sorts have been reported extensively in recent years.[15, 29, 56] When healing is uncomplicated, scar tissue is minimal and the healing time is shorter than that of any other method.

Results in the early attempts at primary closure were so discouraging that many surgeons abandoned the method. Poor results were in many instances due to attempts to close large defects, thereby failing to obliterate the dead space and putting the tissues under considerable tension. Such wounds invariably develop hematomas or become infected and break down.[31] Now most men doing primary closures emphasize the fact that the cyst should be carefully dissected in order to conserve as much normal tissue as possible, and if the wound cannot be approximated without tension, primary closure should not be attempted. To preclude wound infection the cyst should be in a quiescent state when operated, presenting no signs of local induration or tenderness. Complete removal of the diseased tissue, absolute hemostasis, obliteration of the dead space, accurate approximation of the wound edges without undue tension, postoperative wound sanitation and protection from traumatizing influences until healing is complete are all factors in successful primary closure methods.

Regardless of precautions taken, there will be disruption of a certain percentage of wounds closed by any method.[10, 34, 67, 77] Some regard this as a minor catastrophe, stating that healing in these cases is prolonged over that required by the open method. Others believe the healing time is less, provided the entire wound does not break down.

Systemic use of sulfonamides and penicillin has no doubt aided considerably in preventing postoperative infection in recent years. The use of sulfonamides locally before closure is recommended by many who believe it is of some benefit in combatting infection. Others condemn its use in primary closures, contending it leads to a "wet" wound—that is, to serum collection, which delays healing.

The high recurrence rate is a distinct disadvantage to the method. Many brilliant immediate results are constantly being obtained and reported as successful cures, even before the patient leaves the hospital, and we must expect from past experience to find a large percentage of recurrences from all types of primary closures. Rogers[60] believes that many so-called recurrences are in reality infected granulation sinuses caused by failure to effectively obliterate the dead space. He has been able to show by means of serial sections of the tissues removed at operation on recurrence cases, absence of any epithelial elements, indicating that recurrence was not due to presence of diseased tissue left at the time of the original operation. His views are quite generally accepted. Granet and Ferguson[29] point out that failure to recognize the difference between the postsacral fascia and the posterior sacrococcygeal ligament is responsible for the development of dead space and subsequent recurrent drainage. While subcutaneous tissues will grow readily to the vascular postsacral fascia, they will not adhere to the relatively avascular ligament when the fascia is willfully or otherwise removed in the process of excision of the cyst.

OPERATIVE TECHNIQUES AND RESULTS OF TREATMENT

Open Packing

The classical open method[33,53] consists of an elliptical incision wide enough to include all diseased tissues and "en bloc" excision of the cyst and sinuses together with a good margin of surrounding healthy tissue. No attempt is made at closure, the resulting defect being packed open and allowed to heal slowly by granulation. An iodiform or vaseline gauze packing is usually employed, with or without the local use of sulfonamides. The after care of the wound is mainly that applicable to any granulating surface; namely, keeping it clean and as free from infection as possible. It is quite important to prevent pocketing and bridging in these wounds in order that they will heal from the base; otherwise infectious material may be trapped and lead subsequently to the development of discharging sinuses.

Recent trends have been toward less radical excisions and conservation of as much normal tissue as possible. Smaller wounds naturally heal more rapidly. Sawyer and Kast[63] advocate a midline incision extending throughout the length of the cyst and carried down to the sacral fascia. The two halves of the cyst are then dissected by undermining the skin until healthy fat is reached and staying close to the cyst wall. In addition to more rapid healing, the authors state a narrower scar results through conservation of the skin.

Rogers[59, 61] in 1935 began using a conservative excision method in the out-patient clinic of the Massachusetts General Hospital, because he was not satisfied with results he had been obtaining using other techniques. His method consists of a midline cautery incision into the cyst, undermining of the skin edges and cautery excision of only the diseased tissues. In one series of 140 cases so treated there were but two recurrences;[61] in another group of 150 patients followed one to four years after operation, 97 per cent were cured, and the average healing time was 9 weeks.[59] Scars were reported linear and soft. Dunphy[23] recommends this procedure in the presence of large sinuses with widespread secondary fistulous tracts, recent acute infection, marked obesity, gross contamination of the wound during surgery, and in cases where the patient is unable to spend ten days to two weeks in the hospital.

Various attempts to modify the type of incision have been made in an effort to avoid the wide, tender, unstable midline scar. Carrington[12] employs a crucial incision with undermining of the flaps and excision of the diseased tissues, similar to the method used in excising carbuncles. By avoiding the midline where there is a deficiency in the soft tissues and poor circulation, together with preservation of the skin, Carrington states healing is more rapid and there is less likelihood that the scar will break down later on.

Lahey[38] also avoids the midline wound by converting it into a lateral one. After wide block excision of the cyst, a flap of skin and fat is mobilized on one side of the wound, detached at its lower end, and sutured to the sacrococcygeal fascia and to the other side of the wound. The lateral defect is then packed open and allowed to heal by granulation. A later modification of the method[39] leaves the flap attached at both ends, with wide open packing of the lateral defect or closure, if small. Cattell and Stoller[14] of the Lahey Clinic have observed 9 recurrences in 40 cases followed of a series of 59 in which the modified Lahey method was employed.

Buie[9] performs a marsupializing operation. The cyst is first incised, together with any lateral extensions which may exist and the overhanging edges trimmed away. A wedge-shaped ellipse of tissue is removed between the cyst wall and cut edges of the skin and the skin united to the cyst wall by means of a continuous locked suture. The resulting wound is packed open and allowed to heal by granulation. Coffey[16] has reported 50 cases treated by this tech-

nique without a recurrence. He states there is firm union along the suture line in two weeks, and by three weeks the base is dry and shiny. After six weeks there remains only a purplish line with no appreciable depression. Peterson and Ames[52] have employed this operation in 75 to 100 cases and have observed no recurrences.

Partial closure

Theis and Rusher[72] describe a method of block excision of the cyst and approximation of the subcutaneous tissues by interrupted sutures and tension sutures of silkworm gut or dermal tied over buttons or rubber tubing. No attempt is made to close the skin, the edges of which are kept separated by means of a vaseline gauze or iodiform gauze strip. Patients are ambulatory after the tension sutures are removed on the tenth day. In a series of 37 cases treated in this manner there were 7 wound infections (18.9 per cent) and 2 recurrences (15.5 per cent). The average healing time was 26.6 days.

De Prizio[22] employs an oval incision about two or three inches long around the sinus openings, removing about half an inch of skin in the median raphe. The cyst is then excised en bloc and the subcutaneous fat removed for a distance of one and a half to two inches by undermining the flaps. The skin edges are then sutured to the perimedian portion of the sacrococcygeal fascia by interrupted silk or linen sutures, leaving a narrow strip between the skin edges the length of the wound to heal by granulation. Iodiform gauze or sulfathiazole powder and a dry dressing are applied. MacFee[43] reporting on a series of 147 cases he has operated using this technique states 66 per cent were cured, 12.9 per cent recurred, and the average healing time was 69 days. If desired, the raw area may be skin grafted to hasten healing.

Pickett and Meyers[54] use a similar method with the addition of sulfanilamide crystals before the sutures are tied, and state healing is complete in from two to six weeks. They have observed no infections beneath the skin flaps.

Mutchmann and Mitchell[50] employ interrupted silk mattress sutures to unite the skin to the sacral fascia, leaving the ends long and tying over a gauze roll soaked in tincture of azochloramide. The dressing is allowed to remain until the sutures are removed on the sixth to ninth day, following which the patient is ambulatory. The average hospital period for the series of 52 cases reported by these authors was 22.6 days.

McCutchen[45] describes a method employing bilateral V-shaped incisions with the apices toward and about one inch from the midline. These are joined by a transverse incision across the midline, creating four flaps which are undermined to their bases and retracted to permit block excision of the cyst. After the wound has been irrigated with saline and sprinkled with sulfanilamide powder, multiple stab wounds are made in the flaps to permit drainage, and the flaps are secured to the base of the wound by means of interrupted mattress sutures. No attempt is made to suture the skin edges. The ends of the sutures are left long and tied over a gauze roll impregnated with glycerin and a pressure dressing of cotton waste applied. Patients are ambulatory after the third day, the gauze roll is removed on the seventh day and sutures removed in ten to twelve days. Because of adequate drainage, infection which is frequently observed in these cases did not deter healing, the average healing time being 38 days in the group of 37 cases reported.

Morter[49] presents a technique which falls under the category of partial closure. Silkworm gut tension sutures are placed and gauze strips soaked in mercurochrome laid in the wound in such a way that the ends protrude at the upper and lower angles. The skin is closed with interrupted silk sutures and the tension sutures tied over a gauze roll. In 24 hours the gauze packing and stay sutures are removed and the wound is irrigated twice daily for three days with Dakin's solution. Eleven of the thirteen cases so treated were reported to have healed without infection in about half the time ordinarily required by the open packing method.

Primary closure

The literature of recent years abounds in various methods and modifications of methods of primary closure. To attempt a detailed discussion of them all would be futile and unwarranted, since many are but minor variations of others. It is generally agreed that successful primary closure is dependent upon the ability to close the tissues without undue tension, which demands a minimal sacrifice of tissue in order to obtain as small a defect as possible. Successful obliteration of dead space is another prime requisite, as is perfect hemostasis. Infection is the bane of all primary closure methods. While authors disagree as to the value of sulfonamides in the wound, there is general stress on the necessity of careful approximation of the skin edges, postponement of operation until acute infection has subsided, and care in excision to avoid entering the cyst cavity. In the presentation of methods of primary closure, I have found it convenient to group them arbitrarily under four general headings: (1) methods employing tension sutures, (2) methods of approximation without use of tension sutures, (3) methods employing both tension and buried sutures, and (4) muscle plastic flap procedures.

(1) *Methods employing tension sutures:*

Cantor[11] relies on deep tension sutures alone for wound approximation. These pass through the post-sacral fascia and are tied over a gauze roll. Contrary to common practice, Cantor opens the cyst prior to excision. Silk is used for skin closure, and a pressure dressing incorporating an inflatable rubber bag is applied. The dressing is changed the third day and sutures removed on the seventh or eighth day.

Gage[28] reports a series of cases closed with silk or silkworm gut tension sutures and a seasponge pressure dressing maintained ten to twelve days. Of 42 cases so treated, there were 9 skin infections with good healing, and 1 deep wound infection which healed by granulation. The same method has been used by Strug[28] with primary healing in 52 of the 54 cases operated. In neither series was a recurrence observed.

Barker[3] employs a block excision with undermining of the skin and subcutaneous tissues a distance of about two and a half inches on either side, in order to permit closure without tension. Sulfanilamide powder is dusted into the wound and closure effected by use of heavy nylon mattress tension sutures tied over buttons and vertical mattress dermal for skin approximation. He reports 19 cases with no infections and one failure, due to poor hemostasis. The average hospital time was 20 days in his series.

Colp[18] advocates wide block excision with undermining of the flaps next to the gluteal muscles if necessary to eliminate tension. The wound is closed by means of interrupted silk mattress sutures passing through each flap and catching the midline of the sacrococcygeal ligament, then returning through the flap on the same side. The skin is approximated with interrupted silk, the ends of which are left long and tied over a gauze roll. Sutures and dressing are removed on the eighth day.

Byrne[10] effects closure of the wound as well as the skin by figure-of-eight wire sutures passing through all layers and returned through the skin edges. The ends of the sutures are left long and tied over a gauze roll. A pressure dressing is applied and sutures removed the tenth day, after which the patient is allowed out of bed. He reports 17 primary healings without complications out of 20 closed by this method, the average healing time being 16 days. Alley and Rickey[1] using this technique report a series of 86 cases, all but 5 (5.8 per cent) healing per primum. The average hospital time was 32 days.

Kennard[34] avoids buried sutures by approximating the subcutaneous tissues with fine wire mattress sutures brought out through the skin on one side of the wound and tied over separate small gauze rolls. In addition he employs deep wire tension sutures passing through the sacral fascia and tied over a large gauze roll. Before closure the wound is irrigated with saline and sprinkled with sulfanilamide crystals. Skin approximation is by vertical mattress sutures of silk. On the eighth day sutures are removed and the patient is made ambulant the next day. A series of 58 cases is reviewed in which 88 per cent healed by primary intention, 4 per cent of wounds disrupted while the patients were still in the hospital, and 8 per cent broke down after hospital discharge. The average hospital period following operation was 22 days.

Cooper[19] uses deep tension sutures of non-absorbable material tied over a gauze roll and rubber strips. Before the sutures are tied he places a small rubber drain deep to the sutures to emerge at the upper angle of the wound, and sprinkles sulfanilamide powder into the wound or instills 10 c.c. of penicillin solution 1000 units/c.c. The skin edges are united with interrupted sutures. On the second day the drain is loosened, and on the fourth or fifth day it is removed. If the dressing remains dry, sutures are removed in eight to twelve days.

Brown[8] employs a transverse incision and creates a flap by dissection of the proximal skin edge along with uninvolved subcutaneous tissue. A triangular piece of skin from the midportion of the lower edge of the incision is removed along with the underlying cyst. Sulfanilamide crystals are sprinkled into the wound and wide mattress sutures of silk placed through the upper flap and sacral fascia. Figure-of-eight silk sutures passing through the sacral fascia are placed to close the lower triangular defect, and the skin is closed with interrupted fine dermal or cotton. The figure-of-eight and mattress sutures are then tied over gauze rolls and a pressure dressing applied. Sutures are removed the tenth day, following which the patient is allowed out of bed. Healing is complete in 10 to 26 days.

(2) *Methods of approximation without use of tension sutures:* Clark[15] approximates the subcutaneous tissues with interrupted fine cotton, silk, or catgut and the skin edges with silk. Recently the author has used an instillation of 1 per cent or 2 per cent fibrinogen solution into the wound before the deep sutures are tied, following which an injection of a few minims of thrombin solution is made. The advantages claimed for this procedure are assured hemostasis, dead space filled with a normal substance that facilitates healing, the cut surfaces of the wound are coaptated and skin flaps agglutinated to the sacral fascia by a substance that accelerates the normal process of repair. Following skin closure the suture line is sprinkled with sulfanilamide crystals and a dry dressing without pressure applied. The dressing is removed in five to seven days and the

wound exposed to the infa-red lamp. Sutures are removed in a week to ten days. Since employing this method, Clark has had 75 per cent primary healing as compared to 60 per cent to 65 per cent in previous closures employing tension sutures.

Felmus[24] reports a series of 100 cases with 65 per cent primary healing and 11 per cent recurrence, the hospital period averaging 51.7 days. Following irrigation of the wound with saline or chlorazodin solution and light dusting with sulfanilamide powder, the subcutaneous tissues are approximated with interrupted silk or cotton and the skin with interrupted silk. A pressure dressing is applied and maintained undisturbed for eight days. Sutures are removed the tenth day and the patient made ambulant on the twelfth to fourteenth day. Larsen[42] follows a similar technique and reports a series of 225 cases with primary healing in 218 (96.9 per cent). Of 220 followed postoperatively, 23 (10.2 per cent) were observed to have recurrent drainage, which in most cases was due to infection around a subcutaneous cotton suture and which subsided with removal of the offending foreign material. In none was re-excision indicated.

Scott[64] unites the subcutaneous tissues with chromic catgut passing through the postsacral fascia and closes the skin with vertical mattress or subcuticular wire or silk. His experiences with the use of sulfanilamide in the wound are quite interesting. In a group of patients where sulfanilamide crystals were used, 31 per cent became infected and the average healing time was 27.9 days; while in a control group in which no drug was used, the incidence of infection was 27 per cent and the average healing time 24.8 days. However, by using sulfanilamide buffered with calcium carbonate to a Ph of 9, he was able to obtain 96.4 per cent healing and to cut the average healing time to 18.8 days. Serum collections in the wounds which delayed healing were observed in about equal percentage in the three groups, leading to no conclusions as to whether sulfanilamide in the small amounts used acts as a foreign body.

Dunphy and Matson[23] undermine the wound edges a short distance next to the sacral fascia before suturing the deep portion of the subcutaneous fat to the sacral fascia with interrupted fine silk. A vertical mattress suture is employed to close the superficial adipose tissue and skin, and a pressure dressing applied. Sutures are removed the eighth day and the patient discharged from the hospital in ten to fourteen days postoperatively.

Woldenberg and Sharpe[77] use chromic catgut to unite the deeper layers of subcutaneous tissue to the postsacral fascia and plain catgut or cotton for the more superficial layers. The skin edges are carefully approximated with vertical mattress sutures and a pressure dressing applied. Patients remain in bed five days. On the eighth day the sutures at the lower angle of the wound are removed and the remaining sutures on the tenth day. In a series of 100 cases there were five moderately severe and two severe wound infections, all of which had large hematoma formation and five of which had been closed with more than the usual amount of tension. The average healing time was 21.5 days, and there were but two recurrences.

A transverse incision made between the lower ends of the sacroiliac synchondroses and carried to the postsacral fascia is advocated by Johnson and Gorham[32], who claim that by this method the skin is maintained in its original position and acts as a strong protection from further trauma. The cyst is removed by undermining the lower portion of the wound. Sulfanilamide powder is introduced beneath the flap, which is united to the postsacral fascia by multiple mattress sutures tied over gauze. The transverse skin incision is then closed with interrupted sutures of black silk. Holes in the flap created by the mattress sutures allow for drainage, if any, it is stated.

Brezin[6] alters his incision according to the direction of the sinus tract and avoids the midline as much as possible. The incision most frequently used is U-shaped, beginning and ending on the same side of the midline and circumscribing a small eclipse of skin around the sinus opening. Then a U-shaped flap is created by undermining the skin and reflected to expose the sinus, which is shelled out by sharp and blunt dissection. An ointment composed of 10 per cent sulfathiazole and 10 per cent cod liver oil in a lanolin base is applied, and the wound is closed by means of interrupted plain catgut mattress sutures passing through the subcutaneous fat and sacrococcygeal ligament. Silkworm gut Stewart sutures are employed for skin closure. Sutures are removed in one week. When primary closure is not possible, the residual space is filled with the ointment, and part of the skin to one side of the midline is left open to permit drainage and daily insertion of ointment until healing is complete. Brezin reports 30 cases with 1 gross wound infection and 1 recurrence, the average healing time being 26 days. By slight modification in technique he was able to reduce the average healing time in a second group of 30 cases to 13.3 days.[7]

Cattell[13] employs a modified Lahey flap closure. A V-shaped incision is made with the apex in the lateral gluteal region, on one side of the wound resulting from en bloc excision of the cyst. This incision is carried down to the gluteal fascia and a flap constructed which remains attached at both ends.

This is sutured to the sacral fascia and opposite side of the wound, closing the original defect. The lateral triangular defect remaining is closed by suturing the skin in a Y-shaped manner.

(3) *Methods employing both tension and buried sutures:* Granet and Ferguson[29] advocate fine wire sutures to approximate the subcutaneous adipose tissue and to suture the deeper layers to the post-sacral fascia. Originally chromic catgut was used for this approximation, but the wounds have been found to heal faster when wire is used throughout. Sulfathiazole crystals are blown into the wound before the sutures are tied. Deep wire tension sutures, passing through the skin edges and tied over a gauze roll, are used. Skin closure is by means of interrupted wire. A snug dressing is applied and allowed to remain undisturbed until the sutures are removed on the tenth day. Of 50 cases so treated, 45 (90 per cent) were completely healed in less than three weeks, while 5 (10 per cent) required more than three weeks to heal completely. The average healing time for the group was 2.5 weeks. In another series of 37 cases reported,[25] two wounds broke down from infection and two partially reopened from trauma. The average healing time was 17.4 days and the recurrence rate 8 per cent.

Weeks and Young[76] using interrupted chromic catgut for approximation of subcutaneous tissues and silkworm gut tension sutures passing through the sacral fascia and tied over a gauze roll, report 50 per cent primary healing in a group of 63 cases. Of the 31 wounds which disrupted, there was more than 50 per cent healing in 26, only 5 wounds breaking down completely. The average hospitalization for the group was 33 days, and there was only one recurrence requiring reoperation. In another series of 90 such closures, 47 healed primarily, in 40 there was partial breakdown of the wound, and in 3 complete disruption.

Cohn[17] instead of the usual tension sutures employs a series of mattress sutures through all layers, including the sacral fascia, and approximates the subcutaneous tissues with interrupted catgut. After skin approximation, the mattress sutures are tied over gauze rolls placed on either side of the incision.

(4) *Muscle plastic flap procedures:*

Various methods have been devised with the idea of replacing the defect left following excision of a pilonidal cyst with some other tissue, thereby providing a protective pad over the sacrum and eliminating the dead space, even in large wounds which would be difficult or impossible to close primarily by other methods.

Shulte et. al.[67] use a wide block excision of the cyst down to the fascia over the gluteal muscles. The fascia is incised at the line of juncture with the subcutaneous fat, and the incision is carried from one-fourth to one-half inch into the muscle. Two mesial muscle flaps are mobilized to allow them to be turned back over the sacrum and sutured together without tension in the midline. Two lateral flaps are fashioned from the muscle and fascia lateral to the incision and undermined sufficiently to allow them to be united in the midline over the mesial flaps. The subcutaneous tissues are approximated with interrupted sutures and skin closed by means of a subcuticular stitch. Wire suture material is used throughout. The skin suture is removed in five to seven days and the patients are ambulatory in 24 to 48 hours after operation. A report of 59 cases so treated shows 48 healing by primary intention, the average healing time being 8 days. There were 3 accidental disruptions of wounds and 8 wound infections, which raised the average healing time for the group to 11 days. Buffered sulfanilamide as suggested by Scott[64] was tried in 29 of these cases and seemed to cause excessive oozing and serum collection. Nine of the eleven complications occurred in the group where sulfanilamide was used.

Miscall and Holder[47] employ a similar method, but use sulfanilamide routinely in the wound, silk sutures instead of wire, and do not allow their patients out of bed before the fifth day. They report firm and non-painful primary union in about 14 days in a series of 22 cases.

Hipsley[31] reports six cases treated by a muscle flap procedure. Following block cautery excision of the involved tissues, a three inch incision is made lateral to the wound, just above the ischial tuberosity in line with the fibers of the gluteus maximus. The muscle is then cleaned of fat, exposing an area just as wide as the defect is long, and a muscle flap long enough to be turned over to reach the opposite wall of the cavity without tension and thick enough nearly to fill the wound is outlined. The flap is freed at the lower end and turned back as a pedicle flap through a tunnel in the subcutaneous tissues. It is tacked by means of cotton sutures at the upper and lower angles of the wound and to the sides. The skin is then closed loosely over the flap. All six cases developed hematomas or infection, but in spite of this healing was rapid and the final results good.

Pope[56] has recently described a muscle flap procedure which he has used on 130 cases[55] with primary healing in 108 (83 per cent) and wound disruption in 22 (17 per cent). The cyst is excised en bloc and a flap of gluteus maximus muscle with attached fat and skin mobilized on one side of the wound. Tension sutures of wire are placed, passing through the lateral portion of the mobilized flap, the sacral fascia, and emerging through the subcutaneous fat and skin of the opposite side of the wound. A

second layer of wire sutures is then placed, catching only the muscle and fascia near the edge of the flap and carried to the base of the opposite gluteus muscle, to emerge through the skin of the opposite side of the wound as mattress sutures. Sulfanilamide crystals are sprinkled into the wound and skin closed with vertical mattress silk sutures. The wire mattress and tension sutures are tied over a gauze roll and pressure dressing applied. Deep sutures are removed the eighth day, skin sutures the tenth, after which the patient is ambulatory. Sulfadiazine and penicillin are used routinely for the first four to eight days postoperatively.

COMPARISON OF METHODS

To summarize this discussion of the surgical treatment of pilonidal cysts and sinuses, I wish to present in brief tabular form a review of some of the statistical data which have been reported by various workers in the field as to the results which they have obtained, in order that the advantages and disadvantages inherent in each method may be more clearly understood.

Dunphy and Matson:[23] (Peter Bent Brigham Hospital, 1936-1940)

Method	*No. Cases*	*Recurrences*
Open packing	23	1 (4.3%)
Partial closure	5	1 (20%)
Primary closure with catgut	6	2 (33.3%)
Primary closure without catgut	33	2 (6%)
Total	67	6 (8.9%)

Kooistra:[37] (University Hospital, Ann Arbor, Michigan)

Method	*No. Cases*	*% Cured*	*% Not Cured*
Open packing	24	79%	21%
Closure, later open packing	2	50%	50%
Partial closure	10	80%	20%
Primary closure	24	79%	21%
Primary closure with drain	29	66%	34%
Averages	(89)	74%	26%

Shulte et. al.:[67] (Brooke General Hospital, Ft. Sam Houston, Texas)

Method	*No. Cases*	*Primary healing*	*Av. healing time*
Open packing	28	....	77 days
Closure, later open packing	16	....	69 days
Primary closure	28	12	19 days

MacFee:[43] (New York Hospital, New York City)

Method	*No. Cases*	*Av. H.T. Days*	*Cured*	*Recurrence*	*Unknown*
Open packing	36	118	26 (72.2%)	6 (16.7%)	4 (11.1%)
Partial closure	147	69	97 (66%)	19 (12.9%)	31 (21.1%)
Primary closure	34	70	22 (64.7%)	11 (32.3%)	1 (2.9%)

Silverman:[68] (Jewish Hospital, Brooklyn, N. Y., 1931-1934)

Method	*Cases*	*Cures*	*Recurrences*
Open packing	14	11	3 (21.4%)
Partial closure	23	17	6 (26%)
Primary closure	10	7	3 (30%)
Total	47	35	12 (30.8%)

Swinton and Hodge:[71] (Lahey Clinic, Boston, Massachusetts)

Method	*No. Cases*	*Recurrences*
Open packing	29	1 (3.5%)
Lahey pedicle flap	23	8 (35%)
Primary closure	30	5 (16.6%)

McKirdie:[46] (University of Iowa, Iowa City, Iowa)

Method	*No. Cases*	*No. Followed*	*Recurrences*
Open packing	11	11	7 (63%)
Partial closure	6	5	1 (20%)
Primary closure	2	0	?
Primary closure with drain	68	45	14 (31%)
Total	87	61	22 (36%)

Ferguson and McCray:[25] (University of Pennsylvania, Philadelphia)

Method	*Average healing time*	*% Cures*
Open packing or Lahey flap	4 to 10 weeks	50%
Primary closure	17.4 days	92%

Rogers and Hall:[61] (Massachusetts General Hospital, Boston, Massachusetts)

Method	*No. Cases*	*% Recurrences*
Open packing	75	21.5%
Partial closure	25	75%
Primary closure	41	37%
Total	141	32%

Breidenbach and Wilson:[5] (Bellevue Hospital, New York City)

Method	*No. Cases*	*No. Followed*	*Cured*
Open packing	132	32	30 (94%)
Suture and packing	79	24	15 (63%)
Suture and drain	27	9	6 (66%)
Primary closure	29	18	10 (56%)

Kleckner:[35]

Method	*No. Cases*	*Recurrences*
Open packing	4,231	48 (1.13%)
Primary closure, later open packing	103	5 (4.86%)
Primary closure	365	85 (23.29%)

Theis and Rusher:[72] (U. S. Naval Hospital, St. Albans, L. I., N. Y.)

Method	*Cases*	*A.H.T.*	*Infect.*	*Recurrences*
Open packing	29	62.1 days	....	1 (3.5%)
Partial closure, using tension sutures only	39	49.5 days	16 (41%)	3 (7.9%)
Partial closure, authors'	37	26.6 days	7 (18.9%)	2 (5.4%)
Primary closure	45	43.4 days	21 (46.7%)	7 (15.5%)

Raider and Andrews:[57]

Method	*Cases*	*Infections*	*Breakdowns*	*Hematomas*	*Complications*	*Av. hosp. time*
Open packing	26	1	1	....	7%	98 days
Partial closure	26	3	5	....	30%	66.7 days
Primary closure	151	38	8	3	32%	48 days
Total	203	42	14	3		

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HIGH LIGHTS ON MALARIA*

T. V. Oltman, M.D.**

Newton, Kansas

I have reviewed the available literature on malaria of the last three years in order to again focus attention on mankind's most prevalent serious disease. This subject claims our attention. Probably every doctor in this room has treated or known of various cases of recurrent malaria; and will surely continue to have contact with this malady.

GEOGRAPHICAL DISTRIBUTION AND INCIDENCE

Malaria occurs in all the world except north of the 65th parallel in Europe and Asia, north of the 42nd parallel in America and south of the 40th parallel in the southern hemisphere. It occurs up to 2,000 feet of altitude in temperate climes and up to 10,000 feet in the tropics.

Here are some startling figures on the yearly incidence of malaria.

350,000,000 cases in Asia—30-40% of the population
90,000,000 cases in Africa—60% of the population
40,000,000 cases in Europe—8% of the population
20,000,000 cases in Oceana—30% of the population
70,000,000 cases in the Americas—28% of the population

Total 470,000,000 cases in the world—33% of the population

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**Axtell Clinic.

In the U. S. A. the disease occurs in the south, including Texas, Arkansas and Oklahoma, with sporadic incidence farther north.

Our troops are in the following overseas locations where malaria occurs: Germany, Austria, Italy, China, Japan, the Philippines and Oceana.

SPREAD OF MALARIA

In 1930 the mosquito Anopheles Gambia was accidentally imported from Africa to Brazil, by plane or ship. In 1938, in N. E. Brazil, 14,000 deaths were ascribed to malaria from this source. Soper, spending $2,000,000 of Rockefeller money, eradicated the mosquito and wiped out this source.

According to McCoy, the chief problems arising in the spread of malaria are: 1. creating new endemic foci formerly free from malaria; 2. introduction of new strains of parasites where malaria is already endemic; 3. the prompt recognition and treatment of relapses in returning troops.

To illustrate: there have been small epidemics in areas heretofore free: Minnesota, eastern Iowa, northern Ohio and New Jersey, and in 1943 an epidemic of 53 cases of malaria in a small town in Illinois.

It is comforting to know that 90 per cent of relapsing malaria in returning troops is vivax malaria and not the frequently pernicious falciparum malaria.

The latency of the parasites as well as the difficulty in obtaining cures gives us no assurance that sporadic cases or minor epidemics in our country, outside of endemic areas, will rapidly disappear. Falciparum malaria may persist in the latent state in man for one year. Vivax may persist, latent, for three years and plasmodium malariae (quartan) for much longer, i. e. 10 to 20 years. In the "believe it or not" category is a report of two cases of malaria traced to blood transfusions from Blood Bank blood that contained blood from two former natives of Sicily who had had recognizable malaria 25 years previously but not thereafter.

PATHOLOGY

Surprisingly little of a definite nature has been written about the gross and microscopic changes in malaria. The essential basic finding in patients dying from severe falciparum malaria is the finding of amoeboid forms of the parasite clinging to the walls of blood vessels in the liver, spleen, heart and brain, and related thromboses, petechial hemorrhages and small infarcts. These findings alone are sufficient to explain the bizarre symptomatology in severe malaria: the severe headaches, convulsions, coma, dysenteries, choleraic form, typhoid form, acute gastritis form and others.

SYMPTOMATOLOGY

Reports are coming in of chronic headaches, recurrent, of long duration. To cite a case: A marine had recurrent headaches for nine months, then had typical clinical vivax malaria. Upon adequate antimalarial treatment the case was arrested and the headache permanently disappeared.

Malaise and chronic headaches are given as symptoms of subclinical malaria. Autopsies have been done on cases with above symptoms, dying from other causes, in which parasites were found in the blood forming organs, also cloudy swelling, fatty degeneration, small infarcts and hemorrhages.

A report is cited of a hyperchromic megalocytic anemia as a sequel to inadequately treated vivax or falciparum malaria which responded well to liver parenterally.

DIAGNOSIS

There is one noteworthy report of diagnostic import. The author of the report found that either 15 grains of quinine orally or M ii of adrenalin hypodermically, I quote, "invariably" resulted in positive blood smears two to four hours after medication. The use of adrenalin is familiar to us. Heretofore we have been taught that administration of quinine caused parasites to *disappear* from the peripheral blood.

TREATMENT

Recent studies have definitely advanced the rationale of our use of chemo-therapeutic agents in malaria. Whereas formerly quinine and atebrine (quinacrine) had been used with good effect, new knowledge explains why we succeeded, and why we had puzzling lack of success. So we now know why quinine is of greatest value in immediate treatment of severe malaria. It is due to the fact that after oral administration it reaches its peak concentration in four hours. It must be given frequently because it falls far below its therapeutic level in 24 hours.

Atebrine in standard oral dosage of 1½ grains t. i. d. reaches 40 per cent of a final blood level the first day, and overcomes 40 per cent of the remaining deficit each succeeding day so that in four days it reaches 90 per cent of its maximum therapeutic concentration. If the dosage is doubled, 90 per cent is reached in two days; if trebled, 90 per cent is attained in one day. In 24 hours, 90 per cent of atebrine is fixed in tissues, three per cent excreted in urine and six per cent excreted in feces. Atebrine must reach a saturation point of 15 micrograms per 1000 cc. of blood before it is effective. After a full adequate course, a fairly effective level is maintained after administration ceases, for three weeks or more.

The Army evolved the method of two tablets of atebrine every six hours for one day, then one tablet t. i. d. for six days—total of 28 tablets.

Plasmochin (pamaquine), a highly toxic drug, is

effective against sexual forms of falciparum malaria and may be given in dosage of .01 gram t. i. d. with or without quinine but never with atebrine. It is given for 5 to 14 days. Many workers discourage its use because of toxicity.

Regarding these drugs, the following brief summary may be made:

1. None prevent *infection.*
2. Atebrine or quinine arrest symptoms until the relapse.
3. None cure vivax malaria.
4. Atebrine can cure falciparum malaria.
5. Atebrine allows much longer remission of vivax than does quinine.
6. Quinine may be better for quick use in acute emergency cases.
7. Plasmochin is useless in clinical attacks, toxic, and does not affect relapse rate in vivax malaria.

The author of this paper has treated malaria in Southern China for ten years, without benefit of much of the newer knowledge concerning malaria. It was occasionally found that injections of 0.45 grams of neoarsphenamine would help to cut short clinical symptoms of proven malaria which were "resistant" to quinine therapy.

Various new synthetic anti-malarials have been developed and the attainable end is not in sight. At present, the most promising seems to be paludrine, the product of over two years of British research. It is found to be highly effective in vivax and falciparum malaria and has a wide therapeutic range from 5 to 1500 mg. daily. Doses above 500 mg. caused some nausea and vomiting, no toxic symptoms otherwise.

Paludrine kills sporozoites and prevents *infection* in falciparum and is partly effective in preventing *infection* in vivax malaria. It does not *kill gametocytes,* but while a person is on suppressive doses the gametocyte sucked up by the mosquito fails to develop in the mosquito.

Most and his fellow workers made a detailed clinical study of chloroquine (S N 7618) a product of American wartime research and found it to be highly effective and safe, and superior to quinine and atebrine (quinacrine) in treatment of acute attacks of vivax malaria. Acting like atebrine, it does not discolor the skin, causes more prompt control of symptoms and a longer remission period. The total dose is five tablets of 0.3 gm. each administered during four days. For falciparum malaria it is claimed to effect a complete cure, as is also claimed for atebrine.

Pentaquine (S N. 13,276), another product of American research, a drug less toxic and therapeutically similar to the older plasmochin (pamaquine), promises to be superior to the latter in attaining the radical cure of vivax malaria.

In discussing treatment, various authors lay stress on finding periodic headaches in military personnel with "chronic malaria," one author saying 15 to 20 per cent have them and that the syndrome may include depression, irritability, seclusiveness and neurotic-like traits. The headaches are usually bifrontal, worse on arising and on physical effort. Salicylates proved of no value, gynergen made them worse. One hundred mg. of nicotinic acid orally proved highly efficacious in 40 to 45 minutes and gave relief for several days. The rationale is that there are probable brain changes with altered vascularity and capillary stasis and anoxia as the pathologic changes and effects in malaria; vaso dilators should help to overcome the anoxia.

A final word of caution in chemotherapy. Quinine idiosyncrasy, sometimes severe, must be remembered. Occasionally quinine amaurosis occurs with temporary blindness for 18 hours or more. In these circumstances, the drug should be stopped and vaso dilators and Vitamin A are to be used, with sympathectomy in obstinate cases. Atebrine toxicity is probably more rare. Occasionally psychosis is observed, occasionally persistent gastro-intestinal intolerance and also lichenoid dermatosis. Plasmochin has already been mentioned and its great toxicity pointed out.

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WEEKLY CLINICAL PATHOLOGICAL CONFERENCE

Richard J. Fangman, M.D.*

Wichita, Kansas

CASE REPORT

A 71-year-old white male was admitted November 27, 1946, complaining of swelling of the left lower jaw and pain in the left side of the face. The tender swelling and the pain first appeared in September, 1946. The symptoms were attributed to decayed teeth and several were extracted in mid-September. An alcohol block of the Gasserion ganglion in October, 1946, gave marked though temporary relief from the pain.

Examination revealed an elderly white male. There were many decayed teeth and marked fetor oris. A deep socket at the extraction site exuded pus. The swollen area, 3 x 2 cm., was firm and tender. T. 99, P. 100, R. 20. Laboratory procedures showed a negative Kline, normal urine, 6500 W. B. C., a normal differential and 3,400,000 R. B. C., with 10.6 gms. of hemoglobin. Culture of the pus revealed no predominant organism. There were no sulfur granules.

The patient responded to 25000 c.c. penicillin every three hours for five days, with decrease in the tenderness and facial pain. He was dismissed on December 2, 1946, with the diagnosis of mandibular osteomyelitis.

He was readmitted on December 29, 1946, because of a "submandibular abscess," with severe pain on chewing. The swelling had increased slightly in size, measuring 3 x 3½ x 2½ cm. It was now warm and red. The socket continued to exude pus. An X-ray on January 9, 1947, revealed destruction of the entire left mandible, with several sequestra present. Penicillin again gave some symptomatic improvement. Iron therapy did not improve the anemia. Allowed to return home on January 18, the patient was again admitted on January 26, with the same complaints. An X-ray on January 27 revealed progressive bone destruction and sequestration, with a pathological fracture. Penicillin and whole blood were given as preparation for surgery. However, on February 3, 1947, the patient suddenly complained of substernal pain and dyspnea and died.

DISCUSSION

Dr. Fangman: This would appear to be a typical case of osteomyelitis involving the mandible following extraction of abscessed teeth. Odontogenic infections, with injudicious curetting of suppurative lesions or with subsequent extraction, are generally considered the most common causes of suppurative osteomyelitis. Unfortunately, no X-ray studies were made prior to extraction.

Syphilitic osteomyelitis, clinically indistinguishable from suppurative osteomyelitis, must be ruled out. The progressive course, despite adequate treatment short of surgery, suggests this possibility. Also the fact that syphilitic osteomyelitis of the mandible is frequently accompanied by severe facial neuralgia, as in this case, requires careful consideration. The negative Kline and Wasserman eliminate syphilitic osteomyelitis.

Tuberculous osteomyelitis, following introduction of the bacillus into the open wound from infected sputum, though rare, must be considered. The absence of clinically active tuberculosis seems to rule out this possibility. A hematogenous source of infection is very unlikely. Cultures were negative for the tubercle bacillus.

The absence of sulfur granules in the pus and of fistulous tracts rules out actinomycosis involving the mandible.

Dr. Nyberg: Was the possibility of malignant involvement of the mandible considered?

Dr. Fangman: The possibility was considered in passing but because of the characteristic X-ray findings of a suppurative osteomyelitis, it was given no serious consideration. Adamantinomas have a characteristic X-ray picture which differs from the one obtained in this case. Osteogenic sarcoma results in a symmetrical swelling primarily involving the mandible, with the characteristic "sun-burst" effect. The swelling underlying the mandible in this case was considered inflammatory, secondary to an osteomyelitis of the mandible.

Metastatic involvement of the mandible, with secondary development of osteomyelitis following the extraction, was not seriously considered because of the absence of a primary lesion elsewhere in the oral cavity. The pre-existing submandibular swelling was considered due to acute lymphadenitis or to periostitis, secondary to the abscessed teeth. The possibility of malignant change in a mixed tumor of the submaxillary gland was not considered because of the absence of a history of a long standing submaxillary tumor. Mixed tumors occur at an earlier age, averaging 39-40 years. However, one important fact must be remembered; as pointed out by Dockerty, neuralgic facial pain is very often an early symptom of direct extension of an adenocarcinoma (cylindroma type) into the perineural spaces. This is important in view of the patient's complaint of facial pain at the onset of his illness. Dr. Frost,

* St. Francis Hospital, Wichita, Kansas.

do you have any comments to make regarding the X-ray findings in this case?

Dr. Frost: As I reported in the two roentgenograms, I felt that the pathology was a suppurative osteomyelitis, with definite sequestration and a pathological fracture. This was a destructive process within the bone, not the expansive cystic lesion seen with adamantinomas. As Dr. Fangman has stated, the X-ray findings were not characteristic for osteogenic sarcoma.

Dr. Fangman: I believe we must conclude, as did the clinicians, that this was a case of suppurative osteomyelitis involving the left horizontal mandibular ramus, following tooth extraction. The immediate cause of death was apparently acute coronary occlusion. Could we have the autopsy findings?

Dr. C. A. Helwig: We found a hard lump below the angle of the left mandible, 3 x 2½ x 2 cm. An enlarged cervical lymph node was palpable on the left side. Autopsy limitations prevented complete removal of the mandible but as much of the involved area as possible was removed from below by subcutaneous dissection. The tissue from the swollen area was firm, grayish and friable. In some areas this tissue extended into the mandibular ramus. Suppurative osteomyelitis, with sequestration and a pathological fracture, was found in the left mandible.

The pleural cavities contained fluid and both lungs showed confluent bronchopneumonia and considerable pulmonary edema. Two subpleural metastatic tumor nodules were found in the right lung and multiple smaller shotty metastatic nodules in both lungs.

The myocardium was fibrosed, especially in the anterior apical region. An area of fresh infarction was found in the apical region. The anterior descending coronary was markedly calcified and partially stenosed. No fresh occlusion was present. The coronaries were partially recanalized.

Metastatic tumor nodules were present on the surface of the liver, gallbladder, stomach, right kidney and in the right adrenal medulla.

Microscopic examination of the tissue from the mandible revealed partial necrosis of the bone trabec-

(Continued on Page 236)

CANCER OF THE BREAST

Approximately one-tenth of all fatal malignant tumors originate in the breast.

One-half to two-thirds of all breast tumors removed are malignant.

As a general rule all breast tumors should be removed.

In cancer of the breast, the diagnosis can be made on clinical findings prior to operation in 50 per cent of cases. The gross findings at operation make the diagnosis in 35 per cent more. Study of frozen sections at the time of operation should be used to confirm the diagnosis in the latter 35 per cent and to make the diagnosis in most of the remaining 15 per cent. Delay in performing radical mastectomy for the study of sections imbedded in paraffin is rarely necessary or justifiable.

Radical mastectomy remains the treatment of choice in cancer of the breast.

Removal of any breast tumor (or biopsy) should be undertaken only by a surgeon qualified to perform radical mastectomy and after securing the patient's permission for the operation if a malignancy is found.

Radical surgery leads to five-year cures in 75 to 80 per cent of those in which the malignancy is confined to the breast.

Early diagnosis and treatment are the important factors in lowering cancer mortality. Self examinations of the breasts should be practiced at monthly intervals. The breasts should be carefully examined by a physician at intervals of six months. Upon the discovery of a tumor in the breast, surgery should not be delayed.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

The mantle of president of the Kansas Medical Society has been accepted with gratitude, humility and hope. Gratitude for the finest honor of my life. Humility in the realization of the possibilities for advancement of the science and art of medicine on one hand, weighed against my own limitations on the other. Hope that in all issues, both major and minor, we will be able to find the crystallized opinion of the majority of our members and courageously implement its execution.

The democratic character of our constitutional organization has evolved to its present state of perfection or imperfection since, in 1859, the territorial governor, Medary, signed our charter. We have the council, which is composed of a man selected from each of the twelve districts; the house of delegates, composed of representatives from every county society within our borders.

Beyond this and carrying the heaviest burden of responsibility for efficient advancement and continuous effort are the twenty odd constitutional committees. The basic duties of each of these are set forth in our constitution and by-laws. The various chairmen have been named and their committees have been formed to the best of our ability. We bespeak the wish of the council in asking that all chairmen call meetings of their committees as early as possible to study the basic needs and outline the goals for the coming year. It is evident that without such planning our best achievements cannot be reached.

Let us not pour the new wine of possibility into the old jug of tradition. Thus we will keep our minds open and alert to advancement. Let us not bury our heads so deeply in the sands of scientific medicine as to forget that we are not only doctors but also citizens of our communities and of our state and of our nation.

L. L. Nelson

President.

EDITORIALS

Rural Health

The first coordinated effort to improve rural health in Kansas was started a few weeks ago. This, another public service project of the Kansas Medical Society, is still in the planning stage but will shortly grow to become a major activity of benefit to every county in the state.

Your newly created Committee on Rural Health is directed by Conrad M. Barnes, M.D., Seneca. A preliminary meeting has been held where basic principles were established which were reported in detail to the House of Delegates during the state meeting. At the time this is written Society approval has not been obtained, but the outline of proposed activities seems of sufficient interest for consideration by the membership.

There is little controversy over the premise that Kansas is predominantly rural and that the distribution of physicians in rural Kansas could be improved. A brief glance at a map dispells any doubt on the first point, and a review of requests for doctors from 56 Kansas communities should convince skeptics regarding the second. However, many requests come from very small places that in themselves have little to attract a resident physician and appear to have a smaller population than is normally considered necessary to support a physician. So the problem must be reviewed with reference to the proximity of hospitals and other resident physicians and with reference to population. The primary question is resolved to a decision between convenience and efficiency in the distribution of medical care.

Agreement on that point will not come without an understanding of the problem, so your committee recommends the establishment of local rural health councils. These should be inaugurated by the county medical society in cooperation with the state committee on Rural Health. The council should consist of one or two physicians and representatives from other professional fields related to medicine. The remainder of the council should be selected from lay persons in the community, attorneys, bankers, merchants, farmers, etc., giving the entire community a voice. The council then will study all problems pertaining to the health of the community and will not only recommend improvements but will assume leadership in attaining desired results. Meetings probably will be frequent, but an awakened community will be created and through the work of the council the entire community can become adequately informed on its needs.

Rural health, it must be admitted, is the responsibility not of the medical profession alone but of the community also. Through these councils the communities may be shown their responsibilities toward hospital construction, the conservation of a physician's time, and the value of good local public health standards. The medical profession likewise has problems to solve. The high cost of obtaining a medical education has always been a factor of importance, and an intricate but not impossible plan for the creation of scholarships has been suggested to partly alleviate that difficulty. On the agenda also is the problem of improving the professional status of the general practitioner, perhaps through the cooperation of medical schools and the creation of residences in general practice. Also suggested is the possibility of employing a person whose full time duty it would be to visit any community in Kansas with rural health problems and work with the local medical profession. Through the efforts of such a person, the communities would be further inspired to find logical and scientific solutions for difficulties confronting them.

Considerable thinking has gone into the first meeting of the committee and considerable activity may be expected in the near future. This gives the Society another opportunity to serve the people of Kansas and, incidentally, will also be a long forward step in solving a problem that the medical profession itself has for many years found fretful.

Vocational Rehabilitation

Rehabilitation is not a new program. As many of you remember, it started after World War I in 1918. At that time the federal government thought assisting the disabled veteran to return to remunerative employment was its responsibility.

In 1920, at the insistence of highly industrialized states and other persons interested in the problems of the disabled, a law was passed by the federal government to provide for rehabilitation of the disabled civilian. Basically, this law provided for training, artificial appliances and placement service. Many states entered the program at this time, but Kansas did not start its program until 1940.

From 1920 to 1943 much knowledge and experience was gained in working with the disabled. From this experience it was thought that the law of 1920 was not broad enough in its scope; that it did not provide all the services needed to assist the disabled to become employable. For example, it was often necessary to train around a physical handicap such as club feet. It was necessary to place this man in a sitting job, while if physical restoration had been available, it might have been possible to perform surgery

and thereby make the man more mobile.

In 1943 Congress passed Public Law 113, which provided for the following services: counsel and guidance; training; maintenance; materials; supplies; prosthetic appliances; and physical restoration, which included psychiatric treatment. The outstanding feature of this law was the provision of physical restoration services and an agreement by the federal government to pay half the cost of case service in addition to assuming all responsibility for administrative expense.

The objective of the rehabilitation program is now, as always, to assist disabled persons to return to remunerative employment.

With the provision of physical restoration, the Kansas Division of Vocational Rehabilitation, in cooperation with the Kansas Medical Society, selected a medical advisory committee composed of: Charles R. Rombold, M.D., medical consultant; Byron J. Ashley, M.D.; Floyd C. Beelman, M.D.; Clarence H. Benage, M.D.; Harold H. Jones, M.D.; John L. Lattimore, M.D.; Noble E. Melencamp, M.D.; Karl A. Menninger, M.D.; J. Stanley Reifsneider, M.D.; C. F. Taylor, M.D.; Joseph V. Van Cleve, M.D.; Leon R. Kramer, D.D.S.; Sara A. Patterson, R.N.; and H. J. Andres.

The duties and responsibilities of the medical advisory committee include advising the supervisor of physical restoration in respect to general policies; setting of standards; selection of rates; payment methods for services, supplies, and prosthetic appliances; methods of medical reporting and recording by the case workers; and assisting in interpreting to the professional personnel, and to institutions participating in the program, the policies and procedures adopted by the Division.

On all cases a general medical examination report is required from the family physician. If the physician recommends physical restoration, an examination by a specialist is usually secured. If the physical condition of the person is found to be a vocational handicap, to be static, and can be reduced or entirely eliminated, a plan for the physical restoration is presented to the medical consultant for approval. Payment for physical restoration services by the Division is based entirely upon determination of financial need of the client.

During the year 1945-46 the Division processed 77 cases for physical restoration. The cases break down into these general classifications: herniotomies, 4; artificial appliances, 20; braces and shoes, 5; dental, 5; hearing aids, 9; orthopedic, 4; artificial arms, 3; eye surgery, 3; psychiatric treatment, 7; glasses, 2; and medical treatment, 6. Of the 77 cases presented, 10 were rejected by the medical consultant. Twenty-four of the 77 cases processed are now employed, 22 are in training, and the balance are convalescing.

Statistics show that persons classified as rehabilitated in the year 1945-46 earned in one month approximately what it cost the state to rehabilitate them. From a purely economic standpoint, and without considering social implication, rehabilitation is good business.

Public Health Association to Meet

The annual meeting of the Kansas Public Health Association will be held May 27-28 in Wichita, with headquarters at the Allis hotel. Dr. C. H. Kinnaman, state epidemiologist, will be guest of honor at the two-day session.

Official Call to A.M.A.

The American Medical Association has issued its official call to the officers, fellows and members for the 96th annual session, celebrating its centennial year. The meeting will be held in Atlantic City, New Jersey, from Monday, June 9, to Friday, June 13. The House of Delegates will convene on Monday, and the scientific assembly will open at 2:00 P.M. on the same day. The general meeting at which the president will be installed will be held on Tuesday at 8:00 P.M. Various sections of the scientific assembly will meet on Wednesday, Thursday and Friday.

To Study Shortage of Nurses

As a basic step in overcoming the acute shortage of registered nurses and other problems in the field, the National Nursing Council, representing 14 professional organizations, is undertaking an intensive study of the registered nurse's real job and the changes in education that she requires for it, the council announced last month. The study is being financed by a grant of approximately $28,000 from the Carnegie corporation of New York.

As a preliminary feature, a nurses' workshop to define the role of the registered nurse was held in New York in April, bringing together nurses from all parts of the country and representing various fields, public health, industrial nursing, hospital care, and social work. Specialization required for psychiatry cases, cancer patients and new training called for by late medical advances will later be explored at the workshop.

Dr. Esther L. Brown, director of the department of studies in the professions of the Russell Sage Foundation, has been appointed to make the study for the council.

Late figures indicate that now, when more demands than ever before are being made on the nursing profession, there is a shortage of approximately 75,000 nurses. Even more alarming is the severe drop in the number of young women entering schools, which has fallen from 38,000 in 1940 to 24,000 in 1946.

Organizations represented in the council are: American Nurses Association; National League of Nursing Education; National Organization for Public Health Nursing; Association of Collegiate Schools of Nursing; National Association of Colored Graduate Nurses; American Red Cross Nursing Service; Council of Federal Nursing Services; International Council for Nurses; Division of Nursing, U. S. Public Health Service; American Hospital Association; National Association for Practical Nurse Education; American Medical Association; Nursing Unit, U. S. Children's Bureau; American Association of Industrial Nurses.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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STATE INSTITUTIONS

State Hospital for Epileptics, Parsons

Admittance to the State Hospital for Epileptics at Parsons is limited to patients suffering from epilepsy. There is no limitation regarding age, and patients have been accepted who were less than one year old. Since the decision regarding epilepsy is a medical matter, it is always referred to a physician. Therefore, state resources with reference to this institution are of especial importance.

Residence requirements similar to those for other institutions apply here. An adult must have lived in Kansas for one year and must have established a county residence for a period of at least six months. The last portion of the requirement may be waived by the Board of Social Welfare, but involves considerable delay in admission. Children are considered residents if their parents have obtained residence. Indigent patients are admitted without cost, but the Board of County Commissioners of the county in which the patient has residence is obligated for the patient's clothing and burial expenses. The Probate Court determines whether or not the patient or a relative responsible by law for his support shall pay for his board and care. If so, the cost is $5.00 a week in addition to the patient's clothing.

Commitment proceedings begin with the Probate Judge. When that court determines that the patient should be placed in the State Hospital for Epileptics, the judge issues a request to the State Board of Social Welfare. As soon as an affirmative reply is received, the county committing the patient then provides transportation to the institution.

Commitments may be made in one of four categories. The first is through the usual sanity hearing in the Probate Court where the cause of insanity is determined to be epilepsy. Such patients are committed to Parsons rather than to one of the other state mental hospitals. The second category represents patients who are found by the Probate Court to be mentally incompetent and suffering from epilepsy. They are then committed to this hospital rather than to the State Training School for feeble minded. The third category is made up of children under 21 years of age with epilepsy. They are committed by the court but must have a signed application by one of their parents or, where that is impractical, by a legally appointed guardian who is a resident of Kansas and is more than 21 years of age. The fourth group represents voluntary commitments in which the patient himself requests to be admitted to the institution. As in circumstances pertaining to voluntary commitments to other state institutions, voluntary patients at the State Hospital for Epileptics must be released within ten days after they have requested release in writing.

The superintendent of this institution suggests that doctors recommend to the Probate Judge the category under which patients should be admitted since this will facilitate procedure during the hearing and also make it easier for the institution in caring for the patient. The superintendent also advises that under certain circumstances persons suffering from epilepsy are not committed to this institution. Epileptics who are adjudged criminally insane or who are dangerous are sent to the state hospital at Larned, even though epilepsy may be the causative factor in the insanity. Discharge of patients from this hospital is similar to discharge from other state hospitals, as reviewed in the February issue of the Journal.

* * *

State Training School, Winfield

The State Training School at Winfield was set up for the education of idiotic and imbecile children and was designed to give them agricultural and mechanical training. Regulations pertaining to commitment, parole and discharge are similar to those described previously with only the following exceptions.

Commitment is limited to patients who are not over 21 years of age and are incapable of receiving instructions in the common schools. Older persons and non-residents may be admitted if room permits but shall be charged a fair rate of compensation. The other variation between Winfield and other state institutions has to do with the cost of maintaining indigent patients. For those who can pay, the county committing the patient must send to the superintendent at Winfield $40 per person per year. This covers the cost of clothing and dental care. If, at the close of a year, the entire $40 has not been used, the county will be billed only for that amount necessary to bring the total back to $40. Those who can pay are charged $200 on entrance and are required to return to that balance once each year.

Except for those differences and the fact that feeble mindedness must be established, regulations covering this institution are similar to those for other state mental hospitals.

* * *

Sterilization

Physicians of Kansas have frequently requested information concerning the sterilization law. It may be found in General Statutes of Kansas, 1935, 76-155, and states in part: "Except as authorized by this act, every person who shall perform, encourage, assist in or otherwise promote the performance of either of the operations described in this act, for the purpose of destroying the power to procreate the human species, unless the same shall be a medical necessity, shall be fined not less than $100 nor more than $500, and imprisoned in the county jail not less than six months nor exceeding one year."

Under conditions described in this act, surgical procedures for the purpose of sterilization may be performed on patients committed to state institutions. If circumstances exist to make the procedure lawful, all persons participating in the operation and those serving on the Board of Examiners are exempt from civil or criminal liability. Notice in writing must be given the inmate and his guardian, if there be one, of the time and place of the hearing at least 30 days prior thereto. The chief medical officer of the institution, the governing body of the institution and the secretary of the Kansas State Board of Health shall constitute the examiners. The hearing must be held at the institution and the person must be a legally committed inmate of that institution.

Operations permitted for males are vasectomy or asexualization, and those permitted for females are salpingectomy or oophorectomy. The surgeon to perform the operation is designated by the Board of Examiners. The chief medical officer of the institution shall serve as secretary to the Board and shall keep a record of the minutes of the hearing.

New Subcommittee of A.M.A.

A new subcommittee on testosterone and mammary cancer has been elected to serve as an advisory board in research on the use of "male" hormones in the treatment of cancer, according to information released by the American Medical Association last month. The subcommittee will function under the direction of the Therapeutic Trials committee.

The research will be directed toward one particular phase and will have its place in the overall fight on cancer. Funds have been made available for investigators through private sources.



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VETERANS ADMINISTRATION AGREEMENT

The Kansas Medical Society is negotiating with the Veterans Administration regarding a new fee schedule. Through the area office at St. Louis came word recently that the Veterans Administration hopes to adopt a uniform fee schedule applicable to all parts of the United States. That office submitted to the Medical Society an enlarged schedule, together with fees that are acceptable to the Veterans Administration. The new schedule contains several hundred items that were not included in the original agreement.

The suggested schedule of fees has been submitted to the Committee on Veterans Administration Affairs of the Medical Society and to various specialists in classifications not represented on the committee. Some of the fees have been lowered, but on the whole they appear to be fair and in keeping with fees currently charged in this state. As soon as the Veterans Administration informs the Kansas Medical Society that the new fee schedule will be placed in operation, each member will be sent a copy. It is recommended that physicians become familiar with these fees, and it might prove interesting to compare them with the fees now in effect. It is expected that the new fee schedule will probably go into effect about June 1.

The Veterans Administration has issued a pamphlet entitled "Instructions to Fee Basis Doctors." The manual is defined by code as MSL 10-1. Copies are available either at the office of the Veterans Administration Medical Coordinator at Topeka or at the Executive Office of the Kansas Medical Society, 512 New England Building, Topeka. These pamphlets were distributed at the time of the state meeting, and it is recommended that those physicians who failed to receive copies at that time write for them. The Veterans Administration manual of instructions gives samples of all forms that may be used by fee designated examiners. The explanation of the use of these forms will answer many of the questions currently confronting members of the Kansas Medical Society who are participating in the Society's agreement with the Veterans Administration.

The Medical Coordinator requests that all members be reminded again that authority for treatment should be obtained through his office before treatment is begun. In case of emergency, that office may be called collect, number 2-9319. Should an emergency arise during hours when the office is closed, the physician will render the care but will notify the Medical Coordinator as quickly as possible thereafter.

Members are also reminded that statements concerning treatment must be rendered to the office of the Medical Coordinator once each month, whether the treatment has been completed or not. Continuing treatment requires renewed authority which should be requested for each month. If every physician participating in this program will cooperate in those regulations, the Veterans Administration will be able to reimburse the physician for his services more promptly.

A.M.A. Commemorative Stamp

The post office has announced that a new three-cent stamp commemorating the 100th anniversary of the founding of the American Medical Association will be issued and will go on sale June 9.

Central Association to Give Awards

The Central Association of Obstetricians and Gynecologists, whose membership includes physicians from Kansas, has announced an offer to award $100 each to two physicians, research workers or medical students within the confines of the association for the best investigative work and the best clinical work in the field of obstetrics and gynecology. Papers submitted for either award must be in the hands of the secretary not later than August 15, 1947. Complete information may be secured from John I. Brewer, M.D., 104 South Michigan Avenue, Chicago, Illinois.

American Board Examinations

General oral and pathology examinations (Part II) for all candidates for the American Board of Obstetrics and Gynecology, Inc., will be conducted at Pittsburgh, Pennsylvania, by the entire board from Sunday, June 1, through Saturday, June 7, 1947. Applications are now being received for the 1948 examinations, and complete information may be secured from Paul Titus, M.D., 1015 Highland Building, Pittsburgh, Pennsylvania.

Clendening Memorial Dedicated

A fountain in the courtyard of the University of Kansas hospitals was dedicated to the memory of Dr. Logan Clendening at services held on Sunday, April 20. Dr. Clendening, whose death occurred January 31, 1945, was one of the most widely known members of the faculty of the School of Medicine. He first became affiliated with the university in 1910 as an instructor in the department of internal medicine, and had served as professor of the history of medicine for many years.

Changes at School of Medicine

Dr. Gordon Martin, assistant professor of physical medicine and director of the department of physical therapy at the University of Kansas School of Medicine, has resigned that position to be associated with the Mayo clinic at Rochester, Minn. He has been replaced on the faculty by Dr. Donald L. Rose, Baruch fellow in physical medicine at Massachusetts General hospital. Dr. Rose received his medical training at the University of Colorado, and during the war served as consultant in physical therapy to the surgeon general.

CLASSIFIED ADVERTISEMENTS

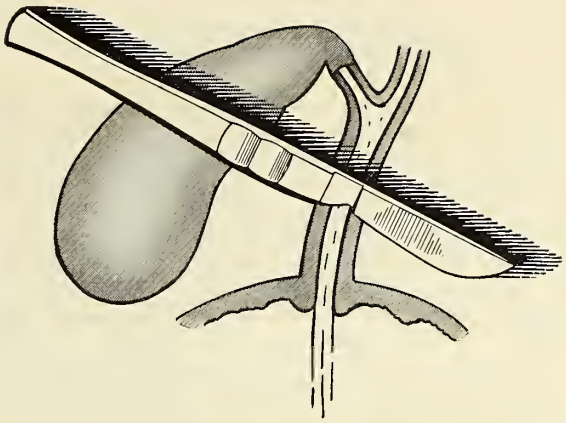
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ELKHART, INDIANA

COUNTY SOCIETIES

Members of the Labette County Medical Society and its Auxiliary were guests of Dr. and Mrs. C. C. Price, Oswego, at a dinner meeting at the Oswego community center on March 26. A musical program was presented, after which the doctors heard a scientific program with Dr. H. P. Boughnau and Dr. H. C. Schmidt, of the University of Kansas School of Medicine staff, as speakers. Dr. Boughnau discussed pneumonias and Dr. Schmidt spoke on blood diseases.

* * *

Dr. Ralph B. Earp of El Dorado, who is beginning his 50th year of practice, and Dr. F. A. Garvin of Augusta, who is in his 52nd year of practice, were honored by the Butler County Medical Society at a meeting held at El Dorado March 9. Dr. Harry Lutz of Augusta was spokesman for the group, reviewing the professional work of the two honored members and presenting each with gifts from the Society.

* * *

The regular meeting of the Wilson County Society was held March 12 in the office of Dr. F. A. Moorhead of Neodesha, and Dr. Raymond Beal of Fredonia presented a clinical pathological discussion. At the time of the April meeting the doctors were entertained by the county commissioners and welfare board at the county nursing home near Fredonia. They were shown through the home and were guests at dinner there.

* * *

The Geary County Medical Society was host to the Golden Belt Medical Society at a meeting held at Junction City April 3. Dr. James S. Hibbard of Wichita spoke on "The Management of Acute Head Injuries," Dr. Lawrence E. Wood of the University of Kansas School of Medicine discussed, "Streptomycin in Tuberculosis," and Dr. Paul W. Schafer, also of the University, presented a paper, "The Management of Bronchiectasis." After a seven o'clock dinner the doctors heard Mr. R. H. Cravens of Salina, recorder of Iris Temple, tell of the Shrine's program for crippled children.

* * *

The Franklin County Society elected the following officers at its meeting at Ottawa March 26: president, Dr. C. W. Henning; vice president, Dr. R. A. Gollier; secretary-treasurer, Dr L. N. Speer.

* * *

A meeting of the Douglas County Society was held at Lawrence March 11. The Society approved a request of the Council of Social Agencies for the establishment of a child guidance clinic in Lawrence and Dr. L. K. Zimmer, president, appointed a committee to work with the council in formulating preliminary plans.

* * *

A dinner meeting of the Cherokee County Society was held at the Columbus country club on March 18. Dr. W. W. Buckingham of Kansas City, Missouri, spoke on chest surgery and showed a movie on the subject, and Dr. Jesse Douglass of Webb City, Missouri, and Dr. Paul Joliet of the Tuberculosis Control Division of the State Board of Health discussed tuberculosis.

* * *

Two guests from Kansas City were speakers at a meeting of the Labette County Society held at Parsons February 26, Dr. D. C. Morgan and Dr. Paul H. Hemphill.

The Mitchell County Society had 100 per cent attendance at a meeting held at Beloit on April 1. Guest speakers were Dr. W. W. Mills of Topeka, president of the Kansas Medical Society, Mr. Oliver Ebel of Topeka, executive secretary, and Dr. Don C. Wakeman, also of Topeka. Additional guests were Dr. F. L. Loveland and Dr. F. C. Beelman, Topeka.

* * *

The Tri-County Medical Society, with which the Cowley and Sumner County Societies are affiliated, held a meeting at Ponca City, Oklahoma, March 27. A golf tournament was held in the afternoon, followed by a dinner at the country club. Speakers at the evening meeting were Father Alfonse Schwitalla, S. J., dean of the St. Louis University School of Medicine, who addressed the group on "The Role of Medicine in the Present-Day World," and Dr. Titus Harris, professor of neurology at the University of Texas, who spoke on "Diagnosis and Management of Psychoneurosis from the Viewpoint of the General Practitioner."

* * *

A meeting of the Clay County Society was held March 12 at Clay Center, and Dr. Carl H. Ruff was admitted to membership. Dr. Orville Clark, Topeka, was guest speaker, presenting a series of 48 cases of leg varicosities, 39 of which were treated by saphenous ligation and injection.

* * *

The April meeting of the Cherokee County Medical Society was held on the 15th in the office of Dr. Frank James in Galena. Dr. Irwin Craig of Joplin, Missouri, addressed the group on gynecological problems.

* * *

Members of the Mitchell County Medical Society entertained members of the state legislature from that area at a steak dinner at the Porter hotel in Beloit on Tuesday, April 22.

* * *

The Sumner County Medical Society met April 17 at Wellington. The program consisted of a symposium on cancer presented under the auspices of the cancer control division of the Kansas State Board of Health. A motion picture showing the surgical treatment of cancer of the colon was shown, and individual cancer studies were presented by Dr. Karl E. Voldeng, Dr. J. D. Hilliard and Dr. J. Allen Howell, all of Wellington, and Dr. M. C. Nash of Wichita.

* * *

A meeting of the Cowley County Society was held April 18 at Winfield. Mr. W. R. McHargue, chief of professional services of the Squibb laboratories, was guest speaker and told of nutritional research studies he recently completed in Cuba.

* * *

Dr. Paul W. Schafer of the University of Kansas School of Medicine addressed members of the Shawnee County Society at their meeting on April 7, his subject being "Bronchiectasis." The talk was illustrated with colored lantern slides. At the business session delegates and alternates to the 1947 state meeting were elected.

Foundation Prize Contest

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons announces that plans have been completed for a foundation prize contest. Those who desire to submit theses may secure complete information by writing Dr. James R. Bloss, secretary, 418 Eleventh Street, Huntington 1, West Virginia.

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MEMBERS

Dr. L. L. Bresette was re-elected president of the Kansas City Society of Anesthesiology at a meeting held recently, and Dr. Paul H. Lorhan was re-elected secretary.

* * *

Dr. Charles H. Lerrigo, Topeka, has resigned as executive secretary of the Kansas Tuberculosis and Health Association, after having served in that capacity for 40 years, and Dr. Seth L. Cox, Topeka, has been named to that position. Dr. F. A. Trump, Ottawa, was re-elected president of the association, and Dr. Ralph I. Canuteson, Lawrence, will continue serving as vice president.

* * *

Dr. Hart Goodloe, who formerly practiced in Independence, has retired and is now living in Jackson, Mississippi.

* * *

Dr. V. M. Winkle, of the Topeka city-county health department, is completing work for a master's degree in public health at Vanderbilt university, Nashville, Tennessee.

* * *

Dr. Charles H. Dewey, Independence, is now serving as a medical rating specialist in the Wichita regional Veterans Administration office.

* * *

Dr. F. G. Meckfessel, Lewis, has been appointed Edwards county health officer.

* * *

Dr. M. L. Bishoff, Topeka, has retired after 46 years service with the Santa Fe hospital association. Dr. F. L. Ford, formerly of Topeka, has been named to Dr. Bishoff's post, chief surgeon of the association.

* * *

Dr. Robert L. von Trebra, Chetopa, was honored by the city last month in celebration of his 50th anniversary in the practice of medicine.

* * *

Dr. S. M. Anderson and Dr. C. A. Parker, both of whom have retired from the practice of medicine, have been made honorary members of the Sedgwick County Medical Society.

* * *

Dr. O. W. Davidson, Kansas City, presented medicine's view of the Wagner-Murray-Dingell bill to the Kansas Dietetic Association at a meeting held in Kansas City in April. Mr. Sam White of the A.F. of L. spoke in favor of the bill.

* * *

Dr. E. R. Beiderwell, Garden City, announces that Dr. L. Scott Frank is now associated with him in practice.

* * *

Dr. J. Fred Casto, Topeka, has moved to Elsa, Texas, where he has opened an office.

* * *

Dr. J. B. Butler, formerly of Coffeyville, is now practicing in Detroit, Michigan, and Dr. R. Edison Walden has taken over Dr. Butler's practice in Coffeyville.

* * *

Dr. Marshall Brewer, who recently completed his work at Bell Memorial hospital in Kansas City, is opening an office in Ulysses.

Dr. L. E. Peckenschneider of the Hertzler clinic, Halstead, has announced that Dr. Dan Huebert, grandson of the late Dr. A. E. Hertzler, will begin town and country practice in the Halstead community soon, after completing internship at Denver.

* * *

Dr. F. W. Buooa, surgeon in charge of the Santa Fe hospital in Mulvane for the past year, has been transferred to the surgical service of the Santa Fe hospital in Topeka.

* * *

Dr. Lindell C. Owensby, who was released from the Army medical corps in January, is opening an office in Manhattan and will limit his practice to diseases and refractive errors of the eye.

* * *

Dr. Wendell Grosjean of Winfield and Dr. H. J. Veatch of Pittsburg were in Chicago in January to attend a course in fracture treatment arranged by the National Academy of Orthopedic Surgeons and the University of Kansas Extension Division.

Research Grants Recommended

Medical research grants amounting to more than two million dollars have been recommended by the National Advisory Health Council for the approval of Dr. Thomas Parran, surgeon general. Grants are contingent upon appropriations by the Congress for the fiscal year beginning July 1, 1947.

Research studies involved cover a diverse number of subjects including tropical diseases, biochemistry and nutrition, cardiovascular diseases, gerontology, hematology, pathology, physiology, surgery, antibiotics, tuberculosis, bacteriology, pharmacology, metabolism and endocrinology, sanitation, virus and rickettsial infections, and public health methods. The use of grants in aid in pursuing these studies implies no degree of federal control, and the investigator may work with full independence and autonomy, submitting only a brief report of scientific progress annually.

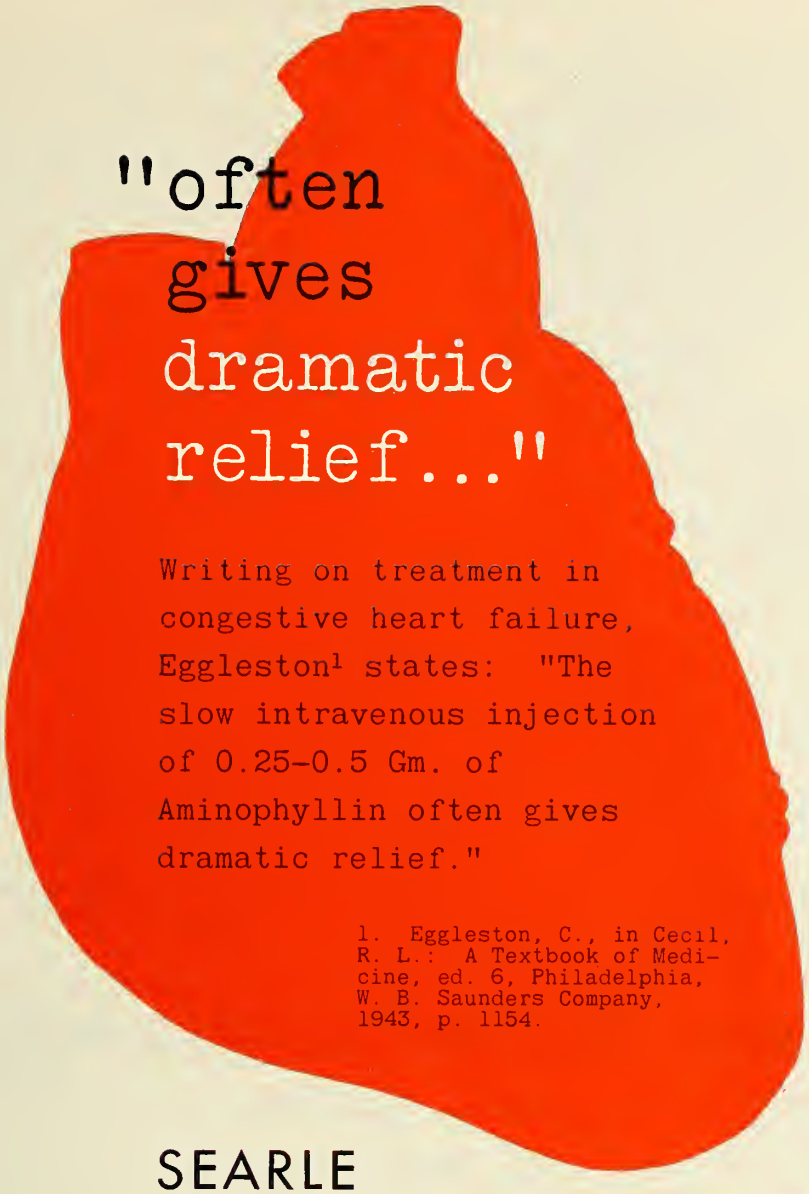
Among the grants recommended for approval is one of $4,240 for study on bacteriology by Cora M. Downs at the University of Kansas.

Chinese Publication to Army Library

A copy of the Chinese Golden Mirror of Medicine, the original of which was published in 1749, has been acquired by the Army Medical Library, according to information released recently by the surgeon general. The set contains an introductory volume and 90 volumes of text with numerous woodcut illustrations, written by a staff of 80 persons in compliance with an imperial order. The first section, on internal medicine, consists of 74 volumes and the second section, on general surgery, consists of 16 volumes.

Chest X-ray Survey Is Conducted

The largest mass chest X-ray survey ever conducted among the civilian population of the United States is now under way in Milwaukee, as a part of the government's fight against tuberculosis and other pulmonary diseases. Every one of the more than 600,000 citizens of the city is being offered a chest check-up in a survey conducted by the U. S. Public Health Service, the Milwaukee Health Department and the Tuberculosis Association.



"often gives dramatic relief..."

Writing on treatment in congestive heart failure, Eggleston[1] states: "The slow intravenous injection of 0.25–0.5 Gm. of Aminophyllin often gives dramatic relief."

1. Eggleston, C., in Cecil, R. L.: A Textbook of Medicine, ed. 6, Philadelphia, W. B. Saunders Company, 1943, p. 1154.

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SEARLE
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Weekly Clinical Pathological Conference

(Continued from Page 223)

ulae. The intertrabecular tissue was invaded by tumor cells and many leukocytes. The tumor was highly anaplastic, forming strands of epithelial cells and an occasional poorly formed gland. The size and shape of the nuclei varied markedly. The involved cervical gland showed areas of typical epidermoid carcinoma. The distant metastases were composed of infiltrating strands of highly undifferentiated tumor cells, with an occasional atypical gland.

ANATOMICAL DIAGNOSIS

1. Primary carcinoma of the submaxillary gland, involving the mandible by direct extension, and with multiple metastases.
2. Suppurative osteomyelitis of the mandible.
3. Coronary sclerosis.
4. Myocardial fibrosis.
5. Bilateral bronchopneumonia, with pleural effusion.

This was a very anaplastic tumor and the diagnosis of primary carcinoma of the submaxillary gland, with metastases, was arrived at only with some difficulty.

A sympathicoblastoma of the right adrenal medulla was ruled out because there were no sympathicoblasts, with rosette formation. The absence of a primary bronchial carcinoma was definitely established by complete dissection of the bronchial tree. The fact that the tumor in our case had the tendency to form different cell types in the metastases favors the diagnosis of submaxillary gland carcinoma. These tumors have the potentiality to differentiate into various types of tissue. For example, Swinton in his report of nine submaxillary carcinomas, found four cases in which the metastases had the structure of epidermoid carcinoma, one of a papillary adenocarcinoma Grade I, one of a fibrosarcoma, and three of completely undifferentiated carcinomas.

Mixed tumors are generally regarded as tumors of low grade malignancy; however, about 10 per cent of submaxillary gland tumors are highly malignant, producing distant metastases. Dockerty, reviewing 81 cases of submaxillary gland tumors from the Mayo Clinic, reported eight cases with distant metastases. In our series from this hospital seven cases out of 83 submaxillary gland tumors produced distant metastases.

True carcinomas of salivary gland occur at 60 years or later, in contrast to the common mixed tumors which appear between 30 and 40 years of age.

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CHARLES HUGGINS, M.D., of the University of Chicago;

JOE VINCENT MEIGS, M.D., of Vincent Memorial Hospital, Boston;

HUGH J. MORGAN, M.D., of Vanderbilt University, Nashville.

A. W. OUGHTERSON, M.D., New York, Medical Director, American Cancer Society;

HARRY C. SOLOMON, M.D., of Harvard University, Boston;

EUGENE F. TRAUB, M.D., of Columbia University, New York;

SHIELDS WARREN, M.D., of New England Deaconess Hospital, Boston.

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Four Weeks Course in General Surgery starting May 26, July 7, August 4, September 8, October 6.
Two Weeks Surgical Anatomy & Clinical Surgery starting May 12, June 9, July 21, August 18, September 22.
One Week Surgery of Colon & Rectum starting May 5, June 2, September 15, November 3.
Two Weeks Surgical Pathology every two weeks.
FRACTURES & TRAUMATIC SURGERY—Two Weeks Intensive Course starting June 16, October 6.
GYNECOLOGY—Two Weeks Intensive Course starting May 12, June 16, September 22.
One Weeks Course in Vaginal Approach to Pelvic Surgery starting May 5, June 2, September 15, October 13.
OBSTETRICS—Two Weeks Intensive Course starting June 2, September 8, and October 6.
MEDICINE—Two Weeks Intensive Course starting June 2, October 6.
Two Weeks Gastroenterology starting June 16, October 20.
One Month Course Electrocardiography & Heart Disease starting June 16, September 15.
Two Weeks Intensive Course in Electrocardiography & Heart Disease starting August 4.
One Week course in Hematology starting September 29.
DERMATOLOGY & SYPHILOLOGY—Two Weeks Course starting June 16, October 20.

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DEATH NOTICES

DAVID C. STAHLMAN, M.D.

Dr. David C. Stahlman, 80, an honorary member of the Butler County Society, died at his home at Potwin March 6. A graduate of the Kansas City Medical College in 1900, Dr. Stahlman had practiced in Potwin for 45 years.

* * *

DAVID J. MOORE, M.D.

Dr. David John Moore, 85, died March 10 at a Newton hospital in which he had been a patient since last October. After his graduation from the University Medical College of Kansas City in 1892, he practiced in Richmond and in Clay county until 1925, when he moved to Dexter. During World War I he served in the Army medical corps. He was an honorary member of the Cowley County Medical Society.

* * *

HORACE CRANDELL EMBRY, M.D.

Dr. Horace C. Embry, 68, who retired from active practice about two years ago, died at his home at Great Bend March 13. He was graduated from the University Medical College of Kansas City in 1909 and practiced in Claflin and Hoisington until 1922, when he opened an office at Great Bend. Dr. Embry was a fellow of the American College of Surgeons and of the American Medical Association.

* * *

CLYDE DALE BLAKE, M.D.

Dr. Clyde D. Blake of Hays, who served as president of the Kansas Medical Society during the 1941-1942 term, died March 30 after an illness of a year and a half. He was a member of the Kansas State Board of Health, a diplomate of the American Board of Surgery, and a fellow of the American College of Surgeons and of the Radiological Society of North America, Inc.

Receiving his education at the Kansas Medical College, Topeka, Dr. Blake was graduated in 1903 and began practice in Ellis. During World War I he served as a captain in the medical corps, and after his discharge in 1919 he practiced in Hays. His son, Dr. Clyde D. Blake, Jr., is a member of the Central Kansas Medical Society, with which the elder Dr. Blake was also affiliated.

ANNOUNCEMENTS

May 20-22—Refresher Course, Nursing Education, University of Kansas School of Medicine, Kansas City, Kansas.

May 21-22—Alumni Clinics and Alumni dinner, Jefferson Medical College, Philadelphia, Pa.

May 26-28—Refresher Course, Radiology and Cancer, University of Kansas School of Medicine, Kansas City, Kansas.

May 26—Refresher Course in Laboratory Procedures, Hotel Lassen, Wichita, Kansas. For Laboratory Technicians, Bacteriologists and Clinical Pathologists.

May 27-28—Meeting, Kansas Public Health Association, Wichita, Kansas.

May 31-June 8—Refresher Course, Psychosomatic Medicine, Offered in Five Different Centers of the State by the University of Kansas School of Medicine, Kansas City, Kansas.

June 4-6—Twelfth Annual Convention and Scientific Sessions, National Gastroenterological Association, Hotel Chelsea, Atlantic City, New Jersey .

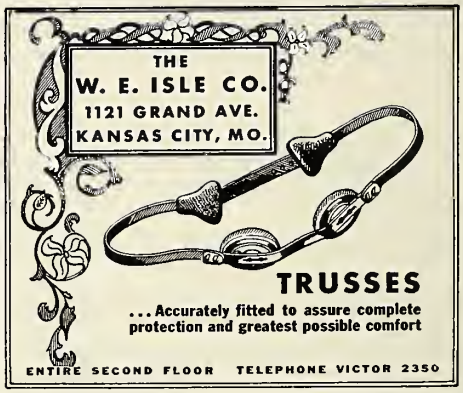
June 5-8—13th Annual Meeting, American College of Chest Physicians, Ambassador Hotel, Atlantic City, New Jersey. Scientific program and examinations for fellowship.

June 6-8—Annual Meeting, American Heart Association, Hotel President, Atlantic City, New Jersey.

June 9-13—Centennial Session, American Medical Association, Atlantic City, New Jersey.

June 11—Smoker, Jefferson Medical College Alumni, Traymore Hotel, Atlantic City, New Jersey.

September 3-6—25th Annual Scientific and Clinical Session, American Congress of Physical Medicine, Hotel Radisson, Minneapolis, Minnesota. Address American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.



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Volume XLVIII JUNE, 1947 No. 6

STREPTOMYCIN*

Wallace E. Herrell, M.D.**
Rochester, Minnesota

Before I consider the new antibiotic, streptomycin, it is well to reflect a moment on what has happened in the last few years in the treatment of bacterial infections. Until approximately ten years ago the antibacterial agents for clinical use were, to say the least, feeble. The last ten years have seen the development of, first, the sulfonamides, followed by tyrothricin (gramicidin), then penicillin and, more recently, streptomycin. The development of penicillin was greatly accelerated by the stimulus of the recent war. Unfortunately, Fleming's observation, which was made in 1929, did not receive its deserved attention until the Oxford investigators isolated penicillin in a form suitable for clinical use in 1940. I think it can be stated fairly that experience in the development of the other antibiotic, penicillin, greatly fostered advances in the development of streptomycin.

An antibiotic is an agent which is elaborated by a microbe and which can be isolated and used in the treatment of infections commonly encountered in man. In other words, antibiotic agents are of microbial origin. There are, in general, three sources of antibiotic agents. One source is bacteria; another, molds and fungi and the third is actinomycetes. Perhaps the most important antibiotic agent derived from bacteria is tyrothricin and the most important to date derived from molds and fungi is, of course, penicillin. Streptomycin is an example of an antibiotic derived from actinomycetes. The whole concept of use of antibiotic agents in treatment is based on the theory of bacterial antagonism. This is, by no means, a new theory. It has been known since the days of Pasteur. Unfortunately, most of the antibiotics known during the early days of bacteriology were too toxic for systemic use.

Streptomycin was described first by Schatz, Bugie and Waksman in January, 1944. The substance was obtained from Streptomyces griseus; hence its name "streptomycin." The great interest in streptomycin lies in the fact that it is effective against certain important gram-negative organisms, many of which are not inhibited by penicillin. Furthermore, streptomycin appears to exert an antibacterial effect on Mycobacterium tuberculosis. At the Mayo Clinic studies on streptomycin began in the spring of 1944. Feldman and Hinshaw later reported on the possible effect of streptomycin in experimental and clinical tuberculosis. My interest in streptomycin has been in its use in the treatment of infections other than tuberculosis, particularly those due to sensitive gram-negative organisms.

It was evident from the early reports on streptomycin that this agent should prove effective in the treatment of infections due to Klebsiella pneumoniae (Friedlander's pneumonia) and such infections as ozena and rhinoscleroma in which this organism commonly can be isolated. In experimental studies streptomycin was found to be effective in the treatment of tularemia and subsequent clinical studies confirmed this impression. Streptomycin also has an inhibitory effect on certain other important gram-negative organisms, such as those belonging to the colon-typhoid-dysentery group. It inhibits the growth of certain important organisms commonly found in the urinary tract, such as Proteus ammoniae and Aerobacter acrogenes.

At this point I would like to mention something about the bacteriologic facilities needed in the hospitals where patients receive modern-day chemotherapy for bacterial infections. Now that selective antibacterial agents are available, better and more adequate bacteriologic study of patients is important. This need poses a real problem to those interested in hospital administration. I am sure that most physicians can remember the time when the type of organism causing an infection was not particularly important because the treatment was largely empirical and, to say the least, not very satisfactory.

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**Division of Medicine, Mayo Clinic.

Today good chemotherapy requires close collaboration between the bacteriologist and the clinician.

Physicians have now learned something about what happens to streptomycin once it is administered to the patient. In general, it behaves not unlike penicillin following its administration by the intramuscular, subcutaneous or intravenous route. Streptomycin diffuses fairly readily throughout most body tissues. Levels in the blood are usually highest about two or three hours after the injection. By repeated injections the level of streptomycin in the blood can be built up rather high. In this respect it differs somewhat from penicillin. Streptomycin appears to be excreted rather readily by the kidneys. Approximately 60 to 80 per cent of the amount given will be excreted in the urine within twenty-four hours after administration. Streptomycin finds its way into the cerebrospinal fluid but appears to diffuse into this fluid more readily in the presence of inflammation. It does not appear to reach the brain tissue in significant concentrations. Streptomycin is excreted in bile and, therefore, should prove of value in the treatment of certain infections in the biliary tract. Streptomycin diffuses through the placenta and, therefore, if it is present in the maternal circulation, it is also present in the fetal circulation. In this respect it behaves much like penicillin. Small amounts of streptomycin also are excreted in breast milk. This means that the nursing infant may receive it by mouth. This fact should cause no great concern because its oral ingestion is not followed by its appearance in the circulation of the infant nor, for that matter, in the adult. The only possible result following oral ingestion is a reduction in certain bacteria in the intestinal flora. The failure of streptomycin to reach the general circulation following oral administration of even enormous amounts is of some importance. In this respect it differs from penicillin, for some penicillin will reach the general circulation after oral administration. As far as streptomycin is concerned, I think this attribute is perhaps fortunate because patients cannot obtain the material and treat themselves by oral administration. As I have already pointed out, the only result that can follow oral administration of streptomycin is a reduction in the sensitive bacteria present in the intestinal tract. This immediately suggests one possible future use of streptomycin; namely, its use in the preoperative preparation of patients for operations on the intestinal tract.

Streptomycin, unlike penicillin, is a fairly stable substance. Even in solution it can be kept a reasonable length of time without loss of potency. In early studies on streptomycin, the unit value was used. Recently quantities have been expressed in grams. One gram of streptomycin, as I shall use it henceforth in this paper, is equivalent to approximately 1,000,000 S units. In ordinary practice, the solution used for intramuscular administration usually consists of 1 gm. of streptomycin per 5 c.c. of distilled water. The average dose for adults is approximately 2 gm. and, in some instances, 3 or 4 gm. per twenty-four hours. The average daily dose for children is 1 gm.; however, on occasions as much as 4 gm. per day have been administered. In general practice, it is simply a matter of deciding on the amount to be used and then giving this amount in five to eight divided doses every twenty-four hours. This is usually given by either the subcutaneous or the intramuscular route.

Streptomycin also may be given by nebulization. For this purpose the solution should contain 50 mg. (50,000 units) per cubic centimeter. This method of administration is commonly used in the preoperative preparation of patients who are undergoing lobectomy for pulmonary suppurative disease. Penicillin and streptomycin are frequently combined and given by nebulization for this purpose. This results in a reduction of both the gram-positive and gram-negative organisms in the tracheobronchial tree. Streptomycin may be, and should be given by the intrathecal route in the treatment of meningitis. When spinal fluid is withdrawn, it is customary to administer 10 c.c. of a solution containing 100 mg. of streptomycin. I have already mentioned that streptomycin may be given by mouth; 1 gm. may be administered every six hours and this usually will result in marked reduction in the number of sensitive bacteria in the bowel.

CLINICAL RESULTS

Some of the most striking clinical results obtained to date with streptomycin have been those which followed its use in the treatment of tularemia. In this disease streptomycin has clearly established its value. In the past, patients who had tularemia were frequently ill for as long as twelve to sixteen weeks and many failed to survive. To date no failures have been reported in cases of tularemia treated with streptomycin. The average dose of streptomycin used has been 2 gm. per day for seven to ten days. The clinical improvement is dramatic and recovery has been uneventful in all forms of tularemia treated.

Bacteriemia and infections of the urinary tract due to Escherichia coli also have responded satisfactorily to streptomycin. There have been some failures in this group due to the fact that the organism was resistant or became resistant to streptomycin.

Rather satisfactory results have been obtained in cases of bacteriemia and infections of the urinary tract owing to Proteus ammoniae and Aerobacter aerogenes. Infections of the urinary tract should be treated intensively for a short period, that is, five

to seven days. Treatment should not be begun until foreign bodies and obstruction have been removed from the urinary tract. The presence of foreign bodies or obstruction favors the development of resistance to streptomycin.

The organism, Hemophilus influenzae, is sensitive to the action of streptomycin. It is not surprising, therefore, that satisfactory results have been obtained in the treatment of influenzal meningitis with streptomycin. It is generally agreed, however, that in the severe cases treatment with streptomycin should be combined with sulfonamide therapy and probably also combined with serum therapy. Likewise, Hemophilus pertussis is sensitive to the action of streptomycin but clinical results to date have not progressed sufficiently so that any definite statements can be made about its value in whooping cough. Clinical trials are under way.

I mentioned earlier that the organism, Klobsiella pneumoniae, was sensitive to streptomycin. Use of this antibiotic has been found of value in the treatment of Friedlander's pneumoniae and it also appears helpful in the treatment of ozena. Unfortunately, the incidence of recurrence and the incidence of the development of resistance on the part of the organism is rather prominent in this group of infections.

In spite of the fact that the organisms belonging to the typhoid or paratyphoid group are reasonably sensitive to streptomycin in the test tube, the clinical results of its use to date in the treatment of typhoid fever have not been encouraging.

Although streptomycin for the most part is effective against gram-negative organisms, a few strains of Staphylococous sureus, a gram-positive organism, also are sensitive to streptomycin. My colleagues and I have had occasion to see recoveries from staphylococcal bacteriemia when the organisms were resistant to penicillin but yielded to streptomycin.

Pasteurella postis, the organism which causes plague, also is sensitive to the action of streptomycin. Plague, of course, is not an important disease in America; however, it is encountered occasionally in certain parts of this country. From the studies on animals reported to date, it is reasonable to assume that streptomycin should prove of value in the treatment of plague.

Early reports of an experimental nature suggested that streptomycin might prove of value in the treatment of undulant fever. The organism responsible for undulant fever is moderately sensitive to this antibiotic. Unfortunately, streptomycin was hailed as a cure for this rather common infection and this is not the case. Experience to date would lead me to conclude that streptomycin may be of some value in the treatment of undulant fever in the early acute stage with or without positive blood cultures. I do not believe, however, that this beneficial effect is much greater than that which can be obtained by using three ten-day courses of treatment with one of the sulfonamides, such as sulfadiazine. It should be pointed out also that the results obtained in the early acute stages can be evaluated only with difficulty for many persons recover spontaneously and blood cultures become negative for the organisms even without treatment. In the treatment of so-called chronic undulant fever or brucellosis of months' or years' standing, I am convinced that streptomycin is of little or no value.

Streptomycin has been used in a variety of other miscellaneous infections but clinical experience to date is not great enough to justify any final statements. One of my colleagues, F. R. Heilman, found that certain spirochetes were sensitive to streptomycin. It was tried, therefore, in a few cases of early darkfield positive syphilis. The results were not convincing; however, the lesions while under treatment would become darkfield negative, but relapses occurred. In light of our present knowledge we were using doses considerably lower than we are using today. In any event, I am inclined to believe that we will do well to continue the evaluation of penicillin in this disease before use of streptomycin is considered in the treatment of this infection.

I mentioned earlier the work of my colleagues, Feldman and Hinshaw, in connection with the use of streptomycin in experimental as well as clinical tuberculosis. I am not qualified to speak with authority on the chemotherapy of tuberculosis. I will try to summarize the impressions I have gained from observing their studies as well as those carried out by other investigators. The evidence seemed clear from animal (guinea pig) studies that streptomycin exerted a definite suppressive effect on the course of this infection. This work naturally led to a widespread interest in its possible value in clinical tuberculosis. The effect of this substance in certain cases of pulmonary and extrapulmonary tuberculosis, including cases of cutaneous tuberculosis, renal tuberculosis and tuberculous meningitis, have been investigated. I believe that these investigators are of the opinion that streptomycin exerts a suppressive effect but has not been hailed as a cure. As the matter stands, it is an important addition to standard forms of treatment. Unjustified publicity can lead to only one result. Patients will clamor for this new form of treatment and if its value is overstressed, patients may refuse conventional forms of treatment including sanatorial care. It is the responsibility of the medical profession to see that this does not occur. I believe it is the general impression that if streptomycin is to be used in the treatment of tu-

berculosis, it must be used for a long period, perhaps months. In this group of cases certain neurotoxic reactions may occur. I will mention those later.

TOXIC REACTIONS

After subcutaneous or intramuscular administration of streptomycin pain may occur at the site of injection. This is not a troublesome nor serious reaction. Certain toxic cutaneous reactions may follow its use, too. These reactions are not unlike those that follow the administration of penicillin to certain sensitive individuals. The reaction may take the form of a maculopapular rash or generalized urticaria. It use of the drug is discontinued, the cutaneous reaction will subside. On occasion my colleagues and I have been able to continue administration of streptomycin after a cutaneous reaction has occurred by changing from one batch of streptomycin to another. In this management of the cutaneous reactions benadryl (B-dimethylaminoethyl benzhydryl ether hydrochloride) or pyribenzamine (N'-pyridyl-N'-benzyl-N-dimethyl-ethylene diamine hydrochloride) is rather helpful. The usual dose of benadryl or pyribenzamine is 50 mg. three times per day. Individuals who are sensitive and who handle the solutions of streptomycin in the laboratory or elsewhere may develop a real dermatitis. In other words, an occupational dermatitis may be encountered.

Perhaps the most important toxic reaction encountered in connection with the use of streptomycin is the neurotoxic effect on the eighth nerve. This reaction imposes a real problem but it is not insurmountable. As a rule it is not encountered when streptomycin is used for a short period as for acute infections although on occasion I have seen it develop soon after treatment is started. It is encountered rather frequently, however, when streptomycin is used for long periods as is necessary in the treatment of tuberculosis. The reaction may take the form of vertigo which results from damage to the auditory branch of the eighth nerve. Both reactions may occur in the same patient. Experience shows, however, that the reaction of the eighth nerve usually will subside if administration of the streptomycin is discontinued soon after symptoms appear. This is a rather selective neurotoxic effect.

No other serious or significant toxic reactions have followed the use of streptomycin. There is no evidence to suggest that its use is followed by interference with normal renal function or that it has any toxic effect on the hematopoietic system.

DEVELOPMENT OF RESISTANCE

I have mentioned before that certain organisms at times will develop resistance to streptomycin; in fact, some organisms will develop resistance to streptomycin with incredible rapidity. In the treatment of acute infections, therefore, intensive treatment for a short period of time is exceedingly important. Every effort should be made to reduce factors which favor resistance. Walled-off abscesses when present should be drained. Foreign bodies should be removed. Stasis and obstruction such as occur in infections of the urinary tract should be dealt with before treatment with streptomycin is begun. Finally, the pathogenic organisms should be tested for sensitivity before and during treatment. This testing necessitates frequent recourse to laboratory procedures which only the bacteriologist can furnish. As I said before, successful modern chemotherapy depends on close collaboration of the bacteriologist and the clinician. If an organism is resistant, or becomes resistant, to streptomycin, treatment will necessarily fail. The development of resistance on the part of the organism is far more important in connection with streptomycin therapy than experience at the clinic has shown it to be with penicillin. In fact, I do not subscribe to much of the current comment concerning the fact that penicillin is losing its powers. The development of resistance on the part of organisms to penicillin, although it does occur, has not been a major problem in penicillin therapy.

COMMENT

To the investigator, all of these problems offer a great challenge. The past decade has been a great era in the treatment of important bacterial infections. Many problems remain unsolved but it is the hope of all investigators that in time agents effective in the treatment of most bacterial infections encountered in man will be developed.

Spinal anesthesia requires as much skill and experience to administer properly as any other type of anesthesia. The care of the patient after the initial injection is just as important as during general anesthesia for the greatest safety and success of the method. Only the anesthesiologist has enough training and experience to use all the drugs and methods of this type of anesthesia. Others had best stick to one or two drugs that they have learned to use safely. Marked abnormalities in any of the three systems, respiration, circulation or central nervous system, usually make the use of this type of anesthesia inadvisable.

The length of the spine and the cerebrospinal fluid volume are more important in determining the dosage than the body weight. The rapid ascent of anesthesia level is more apt to produce a marked drop in blood pressure than producing the same level over a longer time. The circulatory depression is not caused by a specific drug but is related to the total area of the body anesthetized, plus the time over which this anesthesia is produced. In controlling the level of anesthesia, the gravitation factor is much more important than diffusion.—Ivan B. Taylor, M.D., in Jnl. of Mich. St. Med. Soc., November, 1946.

PENICILLIN AND STREPTOMYCIN–A REVIEW OF THEIR CURRENT USES

Herbert A. Wenner, M.D.*

Kansas City, Kansas

Antibiotics are substances prepared from the products of certain living organisms, particularly fungi. Some of these substances exert a powerful antagonist effect upon the life and growth of specific bacteria.[1] Emmerich and Loewe[2] in 1899 isolated a substance from *Pseudomonas aeruginosa* which inhibited the growth of diphtheria, cholera, plague and typhoid organisms. They called this substance pyocyanase. Pyocyanase was not of clinical value in as much as it poisons animal cells. In 1929 Fleming[3] observed that a mold which had contaminated his culture plates lysed straphylococcal colonies. His inquiring mind led him to the knowledge that this mold, later identified as Penicillin notatum, Westling, produced a substance which inhibited the growth of pyogenic cocci and the diphtheria-group of bacteria. The colityphoid and influenza bacilli were unaffected. Fleming gave to this antibacterial substance the name penicillin. In these early years following the discovery of penicillin few clinical trials were made and the substance was used by Fleming as a bacteriological tool.

In 1935 Domagk[4] reported that sulfamidochrysoidine, which is hydrolyzed in the body to sulfanilamide, protected mice against fatal doses of streptococci. A large group of sulfonamide drugs was soon made and used widely in treatment of infectious diseases. A few investigators notably DuBos in America and Chain and Florey in England searched for bacterial antagonists produced by natural enemies of bacteria occurring in Nature. DuBos[5] in 1939 developed in soil a bacterium which following autolysis inhibited the growth of a variety of gram-positive bacteria *in vitro,* and under stated conditions afforded a high degree of protection to mice inoculated with virulent pneumococci. Three active substances were prepared from the bacterial autolysate. They are named *tyrocidine hydrochloride, gramicidin,* and *tyrothricin*[6]. All three substances show clear cut inhibition to gram-positive bacteria *in vitro.* Unfortunately they are injurious to some animal cells, particularly the red blood cell; hence, clinical use of these drugs is of limited value.

In 1940 Chain, Florey and associates[7, 8] cooperated with Fleming in studying the therapeutic value of penicillin. It was quickly appreciated that in penicillin a substance had been found which had heretofore unexcelled bacteriostatic power, particularly in regard to staphylococci, streptococci, gonococci, and clostridia. Moreover, its index of toxicity to living cells was very low. War casualties required large quantities of a drug such as this be made available, and within a short time huge quantities were produced in this country.[9, 10]

The search for new antibiotics continued (Table I). Schatz, Waksman and Bugie[11] found that *Actinomyces griseus* elaborated a substance which inhibited *in vitro* the growth of gram-negative bacteria. This substance they named streptomycin. Other antibacterial substances have been found, among them streptothricin,[12] flavicidin[13] and subtilin.[14] These substances are not in use currently to treat disease in man because they are poisonous, or they have no advantage above those in use.

USE AND LIMITATIONS OF ANTIBIOTICS IN INFECTIOUS DISEASES

The recognition of disease leads to proper application of remedies, and other means failing wisely provides for termination of useless treatment. Penicillin and sulfonamides are widely used and not always wisely. The indiscriminate use of these substances in fevers of obscure etiology is to be condemned, for reasons which are obvious. When small doses of these drugs are given there is the risk that

*From the Department of Pediatrics and Bacteriology, University of Kansas School of Medicine.

TABLE I
SOME ANTIBIOTIC AGENTS OF MICROBIAL ORIGIN

Antibiotic Agent	Microbial Derivation	Investigator		Microbial Antagonism
Pyocyanase	Ps. Aeruginosa	Emmerich and Loewe (2)	1899	Gram + and Gram — bacteria
Pyocyanine	Ps. Aeruginosa	Wrede and Strach (26)	1924	Mainly Gram +
Penicillin	P. notatum Westling	Dubos Fleming (3)	1929	Gram + Cocci and bacilli Gram — cocci
Gramicidin Tyrothricin Tyrocidine	B. brevis	Dubos (5) Hotchkiss and Dubos (6)	1939 1940	Gram + bacteria, mainly
Streptothricin	Actinomyces lavendulae	Waksman and Woodruff (12)	1942	Gram + and Gram — bacteria
Flavicidin	Aspergillus flavus	McKee, Rake and Hauck (13)	1944	Similar to penicillin
Streptomycin	Actinomyces griseus	Schatz, Bugie and Waksman (11)	1944	Gram negative bacteria
Subtilin	B subt lis	Salle and Jann (14)	1945	?

sensitive strains will be weeded out and a heartier race of bacteria survive to resist large doses of these drugs. Also in grave infections with apparently trivial onset the administration of antibiotics may obscure the true nature of the infection and valuable time is lost in instituting proper treatment.

The use of antibiotics in the treatment of infectious diseases should be supported by bacteriological studies. These studies must be directed by the clinician in order that the bacteriologist may know how to start his search. Cultures of body exudates and discharges, and blood cultures reveal pertinent and occasionally surprising information.

Moreover, it is necessary from time to time to determine the sensitivity of the infecting organism to sulfonamides, penicillin and streptomycin. This is not always essential, since the range of sensitivity of organisms to these drugs has been explored, and the dose necessary to control infection caused by susceptible organisms known, at least in part. Bacteria become resistant for reasons to be stated later. Hence, when the patient is not responding as expected, it may be informative to know the sensitivity of the bacterium causing illness. It may be desirable also to learn what concentrations of these drugs are present at a given time in the blood stream. Simple methods for these determinations will be described.

UNITS OF PENICILLIN AND STREPTOMYCIN

The Oxford unit of penicillin is the smallest amount dissolved in 50 cc of meat extract broth which completely inhibits the growth of a susceptible strain of *Straphylococcus aureus* (Heatley Strain).[8] This amount is exceedingly small (0.6 microgram). Expressed differently, a meat extract broth containing 1 unit of penicillin per mg. just inhibits the growth of *S. aureus* in dilution of 1:50,000.[15] Penicillin preparations currently supplied for clinical use have a potency of from 100 to 1000 units per mg. An international unit has been proposed which has been defined as the specific penicillin activity contained in 0.6 micrograms of the International Penicillin Standard. This unit is approximately equal to the original Oxford unit.

The original unit of streptomycin was the smallest amount inhibiting the growth of a suitable culture of *Esch. coli* in 1 cc of broth medium. The National Research Council has stated the official unit to be the amount contained in 1 microgram of streptomycin base which is equivalent to 1 original unit. Hence, the dosage of streptomycin is expressed in terms of weight in which 0.010 gm. equals 10,000 units, 0.10 gm., 100,000 units and 1.0 gm. equals 1,000,000 units of streptomycin.

DETERMINATION OF SENSITIVITY OF BACTERIA TO PENICILLIN AND STREPTOMYCIN

Penicillin. There are several methods.[16, 17, 18] In our laboratory, unless growth conditions are contrary, the method used[18] to determine sensitivity of bacteria to penicillin follows.

Prepare a standard solution of penicillin to contain 20 Oxford units per cc. The standard solution can be kept for a week if refrigerated. For daily tests prepare a secondary standard to contain 0.2 units per cc. The secondary standard is dispensed in the following amounts into 2 sets of Wasserman tubes, 0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8 and 1.0 cc. To all tubes add brain heart infusion broth so that the volume in each tube is 1.0 cc. To one set of tubes add 2 cc of a 1:100 dilution of a standard strain of *B. subtilis*.[1] The sensitivity of this organism to penicillin is of the same order as most strains of hemolytic streptococci requiring as little as 0.0085 units per cc to inhibit a 1:100 dilution of broth culture. To the remaining set of tubes add 2 cc of a 1:100 (this dilution depends on amount of growth occurring in 18 to 24 hours at 37° C) dilution of a broth culture containing the bacterium in question. The concentration of penicillin in the tubes ranges from 0.0035 to 0.065 units per cc. Two control tubes containing 1.0 cc of broth should be inoculated with 2.0 cc of diluted standard and test bacteria. Incubate at 37° C. overnight. The last tube in which no growth occurs is taken as the endpoint. If an endpoint is not reached in the last tube, a second test is run using concentration of penicillin ranging from 0.05 to 20.0 units per cc. If the test organism is a pneumococcus, or streptococcus, usually the endpoint will be less than 0.06 units per cc. Alpha streptococci, enterococci and straphylococci may require higher levels (0.5 to 40 units) to inhibit growth. A method other than this one must be used to test the sensitivity of gonococci and meningococci to penicillin.

Streptomycin. There are also several methods.[19, 20] Price, Nielson and Welch[20] have described a simple method which requires materials and technique available in a small laboratory.

Prepare a standard solution of streptomycin to contain 100 micrograms per cc. Prepare a secondary standard to contain 10.0 micrograms per cc. The secondary standard is dispensed in the following amounts to 2 sets of Wasserman tubes 0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, and 1.0 cc. To all tubes add a medium consisting of peptone 1 per cent, beef extract 0.5 per cent and sodium chloride 0.25 per cent adjusted to pH 8.0 with NaOH, sufficient to bring the initial volume in each tube to 1 cc. To one set of tubes add 2 cc of a 1:100 dilution of *B. circulans*.[2] This organism is sensitive to 0.15 micrograms per cc of streptomycin base. To the remaining set of tubes add 2 cc of a 1:100 dilution of the bacterium in question (grown 24 hours at 37° in medium noted above). The concentration of streptomycin ranges between 0.16 to 3.3 micrograms of streptomycin per cc. Two control tubes are inoculated also with known and unknown bacterial strains. Incubate at 37° C overnight. The last tube in which no growth occurs is taken as the endpoint. If an endpoint is not reached, a second test is run using concentrations of streptomycin ranging from 1.0 to 500 units. The growth of bacteria susceptible to strep-

1 The standard strain of B. subtilis grows exceedingly well at 30° C producing a diffuse turbidity in 24 hours. Its sensitivity is maintained over long periods of time without the necessity of repeated transfers. Cultures maintained at room temperature in screw cap bottle do not lose sensitivity for as long as 6 months.

2 The standard strain *B. Circulans* grows well at temperatures between 30 and 37° C. Broth cultures are stable. The microorganisms may be preserved in screw cap bottle (6°C) for a month without appreciable loss of sensitivity (20). Floccules form which make the endpoint in the serial dilution test easy to determine.

tomycin may or may not be inhibited by 5 micrograms. Resistance is met with and large concentrations may be required to establish an endpoint. One other disadvantage to this method is that it cannot be used to test sensitivity of members in the brucella and pasteurella group of organisms. Most laboratories prefer not to deal with these organisms, for the hazard of workers becoming infected is great.

THE ESTIMATION OF PENICILLIN AND STREPTOMYCIN IN BODY FLUIDS

Simple methods for estimating the concentrations of penicillin and streptomycin in body fluids are in use.[18, 20] In the small hospital where trained persons and special equipment are not always available these methods are practical and useful. Other tests have been used.[16, 19] These are somewhat more complex. In these tests, described below, the standard organisms are those mentioned earlier in sensitivity tests, namely *B. subtilis* and *B. circulans.*

Penicillin. Prepare a standard solution of penicillin to contain 1 unit per cc of broth. Set up 2 rows of Wasserman tubes in series of 9 tubes. Additional series of tubes may be added if there is more than one sample or type of body fluid to be tested. To all except the first tube in each row add 0.5 cc of brain heart infusion broth. To the first tube add 0.5 cc of body fluids, namely serum, urine, cerebrospinal fluid, etc. To the second tube add 0.5 cc also. Mix well, then two-fold dilutions are made by adding 0.5 cc in series discarding 0.5 cc from the 9th tube. The standard solution of penicillin is added to one row of tubes. This 1 unit standard is diluted exactly as above in serial two-fold dilution. Add to each tube 1.5 cc of a 1:100 dilution of *B. subtilis* in broth. Incubate all tubes at 37° C overnight. The last tube in which no growth occurs is taken as the endpoint. This is very sharp; one tube will be clear whereas the next in series will have a typical pellicle of *B subtilis* on the surface of the media.

In reading the test the concentration is then determined by comparing the endpoint of the unknown with that of the standard. An example* taken from Randall, Price, and Welch's paper[18] follows.

	Tube No.								
Fluid	1	2	3	4	5	6	7	8	9
Standard	0	0	0	0	0	0	+	+	+
Serum	0	0	0	0	0	0	0	+	+
Urine 1:10	0	0	0	0	+	+	+	+	+

*From Randall, Price and Welch, Science 101:365, 1945.

The standard caused inhibition in the 6th tube. This represents the effect exerted by 1 unit of standard penicillin.[21] Serum caused inhibition in the 7th tube hence contains twice the amount referable to the standard, namely 2 units. The urine, diluted 1:10 was inhibited in the 4th tube, equivalent in reference to the standard to 0.25 units x10, or 2.5 units. Randall, Price and Welch state that the test can be used to determine levels as low as 0.03 units per cc. To determine levels lower than this is necessary to vary the dilution series of both standard and unknown.

Inhibitory substances may be present in serums and interfere with growth of *B. subtilis.* To detect these inhibitory substances a control set of tubes is run with each test. Serum should be inactivated at 56° C for 30 minutes. Add 0.2 cc of penicillinase to 5 cc of serum. A row of tubes containing serial dilution of serum exactly as outlined in the test is set up. To each tube in the control series add 1.5 cc of 1:100 dilution of *B. subtilis.* Incubate at 37° C overnight. Lack of growth in one or more of the tubes in this series reveals the concentration of inhibitory substances.

Streptomycin. The method is that of Price, Nielson, and Welch.[20] Prepare a standard solution of streptomycin salt of known potency to contain 10 micrograms per cc. In making dilutions of body fluids and of the standard procede as outlined under the method described for penicillin. Do not use brain heart infusion broth; use a modified medium (peptone 1 per cent, beef extract 0.5 per cent, and NaCL 0.25 per cent, pH 8.0) as diluent and culture medium. Add to each tube 1.5 cc of a 1:100 dilution of *B. circulans.* Incubate overnight. The last tube in which no growth occurs is considered the end point.

The concentration of streptomycin in the unknown is determined by comparing the endpoint with that of the standard. An example* follows.

	Tube No.						
Fluid	1	2	3	4	5	6	7
Standard	0	0	0	0	0	+	+
Serum	0	0	0	+	+	+	+
Urine 1:50	0	0	0	0	+	+	+

*From Price, Nielson, and Welch, Science 103:56, 1946.

Growth is inhibited in the standard in the 5th tube. This represents the effect exerted by 10 micrograms of streptomycin. The serum inhibited growth in the 3rd tube, and is ¼ as effective as the standard, hence contains 215 micrograms. The urine caused complete inhibition

TABLE II

SUSCEPTIBILITY OF BACTERIA TO PENICILLIN AND STREPTOMYCIN

PENICILLIN		STREPTOMYCIN	
Highly Susceptible	*Moderately Susceptible*	*Highly Susceptible*	*Moderately Susceptible*
Staph aureus	Str. faecalis (Group D) Lancefield	Esch. coli†	N. gonorrheae*
Str. hemolyticus	Str. viridans	Esch. communior†	D. pneumoniae*
Group A, B, C.			
D. pneumoniae	Anaerobic Streptococci	Aerobacter aerogenes†	Str. faecalis*
N. intracellularis	Actinomycoses bovis	Br. abortus**	Str. viridans*
N. gonorrhoeae	C_1. botulinum	Br. suis**	Sal. suipestifer
H. ducreyi	Spirillum minus	Br. melitensis**	Malleomyces mallei
C. diptheriae	Leptospira icterohemorrhagica	H. influenzae†	E. typhi*
C_1 tetani	Psittacine Viruses	H. pertussis*	
C_1 oedematiens		P. tularense	
C_1 welchii		Sal. enteritidis	
B. anthrax		Sal. typhimurium	
Treponema pallidum		Sal. schottmullerei	
		M. tuberculosis (human)*	
		K. pneumoniae	

* clinical value awaits more study.
** does not bring about cure: remissions occur.
† may quickly develop resistance to the drug.
Taken from Kolmer, J. A., Penicillin Therapy, 1945 D. Appleton, Century Co.

in the 4th tube, is half as effective as the standard, hence contains 5 micrograms; since it was diluted 50 times, the original sample contains 250 micrograms. It is not necessary to use a control series for the demonstration of naturally occurring inhibitory substances in serum to *B. circulans*. Thus far inhibitory substances have not interfered with the test.

ACTION OF PENICILLIN AND STREPTOMYCIN AGAINST BACTERIA

Susceptible Bacteria. A wide variety of infections is caused by bacteria against which penicillin and streptomycin are fully effective. Some of the bacteria susceptible to these drugs *in vitro* are listed in Table II.

There is wide variation in the sensitivity of bacteria to penicillin and streptomycin. Members of alien races differ in resistance to these drugs; members in the same tribe and species are unequal in sensitivity to streptomycin and penicillin (Table III). To some extent this difference in susceptibility of bacteria to antibiotics explain differences in therapeutic response.

In addition to *natural resistance* among strains of bacteria there is the problem of induced or acquired resistance. Resistance to the action of penicillin has been induced in organisms which were initially sensitive to the drug by growing them in a medium in which the concentration of penicillin is progressively increased.[22, 23, 24] Resistance to penicillin has been developed by strains of *Staph. aureus,*[22] *Str. hemolyticus,* and *N. gonorrhoeae,*[25] among others. In a similar manner strains of gonococci and meningococci have become resistant following repeated transfer in increasing concentrations of streptomycin. Of much more serious nature has been the clinical experience that strains of staphlococci develop resistance during treatment with penicillin. Strains of coli-aerogenes bacilli may quickly become resistant to streptomycin. At this time susceptible strains of bacteria appear to develop resistance to streptomycin more easily and speedily than they do to penicillin.

The manner in which staphylococci acquire resistance to penicillin has been studied by De Merec.[22] His observations indicate that even very susceptible strains of staphylococci give rise to a few variants resistant to small concentrations of penicillin. As these variants grow they give rise to other variants of higher resistance. In several steps, but never in one step, it is possible to obtain variants resistant to concentrations as high as 250 or more units per cc. This type of resistance is usually permanent, although Spink[27] has observed resistant strains to become sensitive ones. Using a statistical method, DeMerec was able to show that these penicillin-fast variants arise by rare mutations from sensitive organisms. Such mutants are not dependent on the presence of penicillin, the presence of the latter merely exposing their existence.

Bacteria develop resistance to streptomycin also. The mechanism whereby resistance is developed is not known. It is not unlikely that similar mechanisms operate in the development of resistance to penicillin and streptomycin. In addition to developing resistance to antibiotics, some bacteria elaborate an enzyme, *penicillinase* which destroys the growth inhibiting factor of penicillin. This enzyme may be found in penicillin-sensitive strains of bacteria. Some strains of staphylococci[23, 27] apparently produce this enzyme; these strains may not respond to treatment with penicillin.[23] Lawrence[28] has pointed out that a diastatic enzyme *clarase* also possesses powerful inhibitory effect on penicillin. Similar enzyme systems inhibiting the action of streptomycin probably exist, although evidence of their presence is yet to be uncovered.

METHODS OF ADMINISTRATION

Penicillin is available in vacuum packed ampules containing 5000, 10,000, 25,000, 100,000 and 1,000,000 units. The drug is soluble in distilled water, normal salt solution, and 5 per cent dextrose. It is available also incorporated in beeswax and peanut oil (see below).

Streptomycin is dispensed either as the sulphate or hydrochloride, in ampules containing 1. Gm. of the salt. The drug is soluble in distilled water or normal salt solution.

The routes of administration of these two drugs are outlined in Table IV.

Penicillin and streptomycin may be installed into joint, abscess and empyemal cavities when the in-

TABLE III

RANGE OF IN VITRO SENSITIVITY OF BACTERIA TO PENICILLIN AND STREPTOMYCIN

PENICILLIN		STREPTOMYCIN	
Bacteria	*Oxford Units Per CC.*	*Bacteria*	*Micrograms Per CC.*
Staph. aureus	0.02-5.0	Esch. coli	0.3-256
Str. hemolyticus, Group A	0.0078-0.2	A. aerogenes	0.5-256
"Green Streptococci"	0.02-5.0	E. typhi	1.0-75
Enterococci, Group D	0.01-40.0	K. pneumoniae	0.15-256
N. meningitides	0.016-0.5	H. influenzae	0.08-10.8
N. gonorrhoeae	0.002-0.176	H. pertussis	1.25-5.0
D. pneumoniae	0.008-0.063	P. tularensis	0.15-3.0
H. ducreyi	0.06-0.13	Brucella group	0.10-0.5
H. hemophilus	0.031-0.50	M. tuberculosis (human)	0.15
		Salmonella	0.5-200

fection of these spaces is caused by sensitive strains of bacteria. These drugs may be applied to mucous membranes of the nose, accessory nasal sinuses and middle ear.

Romansky and associate[29,30,31] have tried to prolong the absorption and hence the duration of therapeutic levels of penicillin in the circulating blood. The effort has resulted in suspending calcium penicillin in beeswax and peanut oil. The standard preparation which would maintain therapeutic levels of penicillin (0.6-125 Oxford units per cc) for about 24 hours after a single injection is in the adult 300,000 units of calcium penicillin in 4-8 per cent beeswax in peanut oil contained in 1.0 cc. Penicillin-beeswax-peanut oil mixture has proved effective in the treatment of gonorrhea, pneumococcal pneumonia, and in staphyloccic and streptococcic infections. It should not be used alone in fulminating infections.

ABSORPTION AND EXCRETION OF PENICILLIN AND STREPTOMYCIN

Penicillin. The fate of penicillin administered through various portals has been studied.[3,30,32,33,34] Following a single intravenous injection of 5000 to 40,000 units the peak concentration in the blood (0.156-2.5 units per cc) is reached in a few minutes and falls rapidly during the ensuing three hours

TABLE IV

ROUTES OF ADMINISTRATION OF PENICILLIN AND STREPTOMYCIN

Route of Administration	*Advantages and/or Disadvantages*	
	Penicillin	*Streptomycin*
ORAL	Absorption is irregular. Blood concentration is poorly maintained. Dose = 3 — 5 times intramuscular requirements 500,000-3,000,000 units necessary for good levels.	Very little if any absorbed in blood. Destroys susceptible bacteria in gut. 2-3 Gm. daily required. Useless in systemic infections.
INTRAMUSCULAR	Best route for general use. Maximum serum levels 30 min. to one hour. Requires injection at 3 hr. intervals at most. Dose range 5000-30,000 units; in Beeswax containing 300,000 units 1 dose in 24 hours.	Usual route of administration. Maximum serum levels occur in 1-3 hours. Addative effects obtained with injections at 3 or 4 hour intervals. Painful: procaine may be used.
INTRAVENOUS	Used in severe infections, septicemia, endocarditis, etc. Given along with intramuscular route or by continuous intravenous drip. May be given in isotonic saline or 5% dextrose. In continuous drip give at rate 30-40 drops min., 20,000 to 80,000 units per liter.	Seldom used; no advantage over intramuscular route. May produce unconsciousness if given rapidly.
INTRATHECAL	Generally 10,000 units every 12 hours is given. Dose=1000 units per cc of isotonic saline. Intravenous or intramuscular route also used. Good levels persist 12 to 24 hours.	25,000 to 100,000 units every 24 hours is given. Dose is made up in 5 to 10 cc of saline. Intramuscular therapy used also. Good levels persist 24 hours or longer.
AEROSOLS	An aqueous solution of penicillin containing 50,000 units per cc is nebulized by passing 8 liters of O_2 thru it per minute. Good levels, 4.0 units per cc (serum) can be achieved.	Concentrations of 50,000 units per cc may be inhaled to a total amount of 500,000 units in 24 hours. Little streptomycin is absorbed from the lung.

TABLE V

MEAN CONCENTRATIONS OF PENICILLIN AND STREPTOMYCIN IN BODY FLUIDS FOLLOWING ADMINISTRATION THROUGH SEVERAL PORTALS AND WITH VARYING DOSES.*

Portal of Administration	*Dose Oxford Units*	*CONCENTRATION OF PENICILLIN PER CC OF SERUM*						*CONCENTRATION OF STREPTOMYCIN PER CC OF SERUM*						*DOSE UNITS 1 unit = 0.1 micro*
		5 min.	*30 min.*	*1 hr.*	*2 hrs.*	*3 hrs.*	*4 hrs.*	*15 min.*	*30 min.*	*1 hr.*	*2 hrs.*	*4 hrs.*	*6 hrs.*	gram
1. ORAL	25,000	0.02	0.02	0.1	0.02	.....	0.39	0	0	0	0	0		1,000,000
	300,000	.....	2.0	2.0	0.50	0.10	0.04							
	5,000,000	.....	10.0	10.0		.....	0.04							
2. INTRAMUSCULAR	10,000	0.039	0.078	0.078	0.039	.....	.....	0	..	3.0	0	0	..	40,000
Adults	20,000	.....	1.0	0.6	0.1	.....	.....	..	..	11.0	8.0	5.0		200,000
	50,000	.....	.....	0.960	0.48	.....	.....	6.0	..	10.0	4.0	8.0	..	400,000
	60,000	0.60	1.4	1.0	0.20	.....	.....	8.0	..	6.0	16.0	14.0	..	500,000
Infants	5,000	.....	1.6	0.8	.....	.....	.....	..	..	17.0	17.0	16.0	9.0	600,000
	10,000	.....	1.4	0.6	.....	.....	.....							
Peanut-oil beeswax mixture	100,000	.....	.....	.....	0.312	0.312	0.312							
	200,000	.....	.....	0.625	0.625	0.625	0.625							
	300,000	.....	.....	.....	0.625	2.0	1.25							
3. INTRAVENOUS	10,000	0.625	0.078	0.039	0	0	.....	6.0	..	3.0	0	0	..	50,000
	20,000	1.250	0.312	0.078	0.015	0	.....	22.0	..	8.0	..	..	3.0	200,000
	40,000	2.50	0.156	0.078	0.010	0	.....	32.0	..	12.0	8.0	..	6.0	400,000
	60,000	2.00	1.40	0.40	0.20	0	.....	47.0	..	22.0	14.0	..	10.0	500,000
								32.8	29.0	27.0	20.0	10.0	15.0	600,000
		CONCENTRATION PER CC OF CSF FLUID						CONCENTRATIONS PER CC OF CSF FLUID						
		6 hrs.	*15 hrs.*	*24 hrs.*	*28 hrs.*	*36 hr*		*15 min.*	*30 min.*	*1 hr.*	*2 hrs.*	*3 hrs.*	*24 hrs.*	
4. INTRAVENOUS		5.0-												
5. INTRATHECAL	10,000	25.0	0.156	0.156	0.19	.....		..	..	..	0	0	0	500,000
												13.2		750,000
													0.9-25.0	(TBC meningitis) 10,000†

*Compiled from Reports in the literature (39, 40, 41, 42, 43, 44, 45)

(Table V). With large doses (20,000 units) detectable quantities of penicillin remain in the blood longer than with smaller doses. If penicillin is administered by continuous intravenous drip (50,000 units over each 3 hour interval) a fairly constant serum level of 0.20-0.30 units per cc can be maintained. Single intravenous injections given every three hours do not provide adequate concentration to stop bacterial growth during the entire interval between injections.

Following intramuscular injection maximum blood concentrations are reached more slowly, usually in one or two hours. These levels arise more slowly and are maintained longer than is the case in intravenous administration. Penicillin can be injected into body cavities, such as knee joint and pleural space. Such administration is followed by slow local absorption and delayed excretion; the local concentration of penicillin is effective for 10 to 20 hours.

Penicillin does not enter the cerebrospinal fluid following intravenous or intramuscular doses ranging from 10,000 to 30,000 units. Although this appears to be true in healthy subjects, in persons with meningitis penicillin may be detected in the cerebrospinal fluid (0.03-0, 35 units per cc) following parenteral administration. The experience of Rammelkamp and Keefer indicates that intrathecal administration of penicillin (10,000 units) in a normal person results in a concentration of 25 units per cc 6 hours later. The level then falls rather sharply so that at 18 hours very little penicillin can be detected in the spinal fluid. In patients with meningitis to whom the drug has been given intrathecally there is more rapid absorption of penicillin from the spinal fluid; appreciable quantities may be found in the blood for as long as 18 hours following intrathecal administration.

Penicillin is destroyed in the stomach. If huge doses (300,000 to 5,000,000 units) are given by mouth appreciable levels (1.25-20.0 units) can be detected in the blood in 20 or 30 minutes.[34] This is considerable individual variation in absorption of the drug. It would appear that about ⅓ of the total dose is absorbed; the remainder must be destroyed or excreted. Failure of maximum absorption from the small intestine is stated to be responsible for relatively insufficiency of the oral route.

Penicillin is absorbed freely from the lung during inhalation of aerosols. Blood levels as high as three or four units of penicillin per cc have been obtained.

Penicillin is excreted in large part by way of the kidneys. Following intravenous administration of penicillin almost all appears in the urine within an hour. The percentage of the administered dose excreted in the urine varies. In normal adults the variation ranges from 37 to 99 per cent. The amount excreted probably depends upon the route of administration and dosage. Some penicillin fractions are inactivated by various living tissues.[35] Renal disease delays excretion.

Streptomycin. The blood level of streptomycin following a single intravenous injection is maintained at a higher level for a longer period of time than is the case with penicillin.[36] Following intravenous injection of 200,000 to 400,000 units (0.2-0.4 Gm.) 5 to 10 units per cc of circulating blood is still present at the end of 4 hours, representing roughly a fourth of the dose administered. As for penicillin none can be detected in the blood at a corresponding period following intravenous administration.

The concentration of streptomycin in the blood following intramuscular injection does not reach the high value observed following intravenous injection (Table V). During the ensuing three hours, the dosage remaining constant blood concentrations reach corresponding levels regardless of whether the drug is given intramuscularly or intravenously. If streptomycin is administered every three hours an addative effect is observed.[37]

Streptomycin, like penicillin does not enter the cerebrospinal fluid following parenteral inoculation (50,000 units) in patients who do not have meningeal disease. Like penicillin, however, streptomycin can be detected in appreciable concentration in the spinal fluid of children with meningitis.[38]

Streptomycin given orally is poorly absorbed, and most of the drug appears in the feces. When large doses (1.0 Gm) are given daily small amounts (one to six units per cc) may be found in the blood. Hence, very little is found in the urine. The stool concentration varies from 1,000 to 5,000 units per Gm. of feces.[38]

Streptomycin diffuses into body transudates and exudates. It enters fetal cord blood and amniotic fluid. Sometimes diffusion is slow (6 units in 2 hours following 600,000 units intravenously). A corresponding dose given to patients with perforated peptic ulcers has provided within 2 hours good concentrations of streptomycin (17.8 to 22.0 units) in peritoneal fluid.[36]

When administered parenterally streptomycin is excreted for the most part unchanged in the urine. There is wide variation in the amount excreted. With large doses (0.5 Gm) 41 to 92 per cent in the urine within 24 hours. Streptomycin is excreted slowly as compared with penicillin. Only about two per cent of the drug appears in the feces. It appears that some streptomycin is destroyed or retained in the body.

TOXICITY OF PENICILLIN AND STREPTOMYCIN

Penicillin. No significant toxic effects have been noted following systemic therapy with the sodium or calcium salt of penicillin. The most common complication is urticaria. Urticarial wheals appear between the fifth and tenth day of treatment. These may be benefited by epinephrine or benedryl. There may be a transient azotemia. Thrombophlebitis occurs during continuous intravenous medication. The intrathecal injection may produce headache, vomiting and pleocytosis.[39] Walker[40] among others notes that penicillin given intrathecally can cause changes in the arachnoid, alter nerve fibers and produce radiculitis. Convulsions may occur.

Streptomycin. A number of toxic reactions have been noted following parenteral injection of streptomycin. Among these are flushing of the skin, and a sense of fullness shortly after injection of the drug. Headache, transient urticaria and fever may occur also. Buggs *et al*[36] report two patients who lost consciousness following rapid intravenous injection. Recovery occurred in a few minutes. Thrombophlebitis occurs. There may be generalized aches and pains in the joints. Fatty metamorphoses in parenchymal cells of the liver and the tubular epithelium of kidneys have been seen in experimental animals.[41] Eighth nerve deafness has occurred also[42]. When the dosage in adults is kept under 1.0 Gm. daily, few reactions occur.

CLINICAL USE OF PENICILLIN AND STREPTOMYCIN

Penicillin is a drug possessing herculean ability to combat infection caused by a number of bacteria. It is not a panacea for all of the infectious diseases; its use in serious illness is based on an understanding of the underlying disease process. Of itself, it cannot promote healing except by bringing to a halt bacterial growth. By retarding bacterial growth the normal defense and reparative mechanisms of the body are mobilized.

Staphylococcic Infections. Staph. aureus causes infections in man more often than *Staph albus.* Among the infections caused by staphylococci are cellulitis, osteomyelitis, cavernous sinus thrombosis, meningitis, endocarditis, and sepsis. Results achieved with the use of penicillin in these pathological states have been good compared with all earlier forms of treatment. The *in vitro* sensitivity ranges from 0.08 to 5.0 units of penicillin per cc. Some strains become resistant to the drug; others may liberate a substance inhibiting the action of penicillin. Prognosis is influenced by the duration of illness prior to treatment as well as acccessibility of a supperative focus of infection.

In staphylococcic infections large initial doses are preferred, particularly if bacteremia is suspected and confirmed by cultures. The focus of infection should be sought after, and, if accessible to surgery, drained. In children the total daily dose adequate for most infections is stated[43] to be for infants 20,000 to 40,000 units, for larger children 60,000 to 80,000 units. In overwhelming sepsis 100,000 to 150,000 units may be needed. In infants who are in shock intravenous administration of penicillin is imperative. In infants and children who are not in shock intramuscular injection is the method of choice. In adults with staphylococcic bacteremia a daily dose of 200,000 to 400,000 units is used to bring the infection under control[44]. In meningitis the drug is given intrathecally and intramuscularly.[3] Sulfonamides may be given also to arrest growth of penicillin-resistant staphylococci. Penicillin is instilled into staphylococcic empyema cavities and infected joint spaces. In acute hematogenous osteomyelitis penicillin is very effective. The lesions heal but may recur. In chronic osteomyelitis the results have not been so impressive. The presence of sequestra delays the clearing up process. Surgical care may be necessary in such cases. Calcium penicillin in beeswax and peanut oil is used in the treatment of furuncles and abscesses.

The use of penicillin in staphylococcic infections with bacteremia has reduced the mortality rate. About 90 per cent of these patients, all ages considered, died in the days preceding the sulfonamides. The mortality rate is still about 30 per cent. Among children ill with hematogenous osteomyelitis 10 to 50 per cent died; now the mortality rate is less than 5 per cent. In general children suffering from staphylococcic infections appear to respond to treatment better than do adults.

Streptococcic Infections. Among all the streptococci, the hemolytic streptococcus is the chief offender in man. Among the infections caused by this organism are tonsillitis and pharyngitis, scarlet fever, pneumonia, meningitis, pericarditis, arthritis, and sepsis. Complications of these diseases are otitis media, mastoiditis, empyema, and cavernous sinus thrombosis. The results of treatment of these conditions with penicillin have been good. The *in vitro* sensitivity of most streptococci ranges from 0.008 to 0.2 units of penicillin per cc. Most streptococci infections in adults respond to 100,000 units of penicillin given daily. In children 20,000 to 60,000 units generally will be enough to control infection with this bacterium.

Penicillin is superior to sulfonamides in the treatment of infections caused by the hemolytic streptococcus. These bacteria are relatively sulfonamide resistant as compared with pneumococci, meningo-

3 Some students of infectious diseases do not belive it necessary to administer antibiotics into the subarachnoid spaces in treating purulent meninigitis. Whether to do so or not is not settled. It is clearly evident that other routes, namely intravenous and intramuscular, if they suffice to control these infections are to be desired.

cocci and staphylococci. Nevertheless, sulfonamides are of value in the treatment of otitis media, mastoiditis, meningitis and pneumonia of streptococcic origin. Blake[45] stated that sulfonamides should be used in less severe infections where there is tissue invasion without suppuration, necrosis and bacteremia. It is now reasonably clear that penicillin need not be reserved for severe infections; it may be used in mild streptococci infections also now that it is available.

Penicillin shortens the course and severity of streptotoccic pharyngitis. Plummer *et al*[46] have temporarily cleared the pharynx of streptococci in 24 to 48 hours following penicillin therapy. Recurrences occurred if the drug was stopped at this time. Young adults were given 15,000 units every four hours for six days. A lesser period of treatment failed to eradicate all hemolytic streptococci, and in some instances there was recurrent pharyngitis.

Penicillin is useful in the treatment of scarlet fever. With adequate treatment there is a prompt fall in temperature, and a reduction of toxic manifestations. Complications occur less often. The carrier state is of shorter duration[67]. Hoyne[68] points out, however, that scarlet fever is a mild disease now, and it is not entirely clear what the effect of penicillin will be in preventing the complications in severe scarlet fever.

Impetigo caused by *Str. hemolyticus* responds swiftly to parenteral or topical penicillin.

It is clearly evident that penicillin and sulfonamides have reduced the complications following streptococcic infections. Penicillin is superior to sulfonamides. If complicating lesions develop following untreated infection they may respond favorably with the use of chemotherapeutic substances. Not much is known concerning the prevention of late complications such as nephritis. Recent evidence[47,48,49] indicates that penicillin given prior to or during an attack of acute rheumatic fever does not prevent or cure it. Penicillin is not of value in the treatment of rheumatic fever.

Bacterial Endocarditis. Almost every known bacterium has been met with in endocarditis. Approximately 95 per cent of all cases is due to a streptococcus of the viridans or non-hemolytic type. Enterococci (Group D Streptococci) also cause endocarditis. Loewe and associates[50] distinguish an organism in endocarditis which they call streptococcus sbe. These cases are refractory to treatment. The average range of susceptibility of green streptococci is 0.2 to 5.0 units of penicillin per cc. Enterococci (*Str. faecalis*) are most resistant, being resistant at times to more than 40 units of penicillin per cc.

The successful treatment of bacterial endocarditis depends in part upon the duration of the disease and on the susceptibility of the offending organism to the drug. In this disease a constant drip of penicillin, preferably intravenously should be used[51]. In this way it is possible to maintain constantly inhibiting blood levels day and night. Some patients have done well when the drug was given by continuous drip whereas fractional intramuscular administration failed to clear the blood stream of bacteria. Whenever the bacterium is resistant to more than 0.5 units of penicillin per cc, large doses of penicillin should be administered by intravenous drip. Intramuscular injection may be resorted to, particularly if there is difficulty in entering veins, and in cases when the offending organism is quite sensitive.

The method of treatment used by Goerner, Geiger and Blake[51] seems to be the logical approach in treatment of this disease. The basic plan of treatment was to treat each patient with about 240,000 units of penicillin daily for three or four weeks. The penicillin was usually given by continuous intravenous infusion maintained day and night. A larger dose or longer course of treatment was dependent on the resistance (*in vitro*) of the infecting organism to penicillin, unsatisfactory serum penicillin levels, or unfavorable clinical course. The total quantities of penicillin in cured cases ranged from 3.9 to 17.4 million units, the number of days of treatment ranged from 20 to 70. The employment of massive doses in long courses and administration of the drug by a route making possible continued high titers of penicillin in the blood will, as a rule, bring the infection under control in most cases. The use of anticoagulants appears to be unnecessary.

In children with heart disease, acquired or congenital, it is advisable in extraction of teeth to give 100,000 units of penicillin one hour before and one hour after the operation. Penicillin may be used in prevention of complications following tonsillectomy in these individuals.

Pneumococcic Infections. Among the infections caused by the pneumococcus are pneumonia, empyema, otitis media, mastoiditis, meningitis, pericarditis, endocarditis and sepsis. In most instances these conditions respond quickly to treatment with penicillin. The average *in vitro* susceptibility to penicillin of pneumococcic is 0.04 units per cc. (range 0.008-0.063 units per cc.) The advance of pneumococcic infections is brought quickly under control in most cases by penicillin. Sometimes the infection is more or less refractory to penicillin. Sulfonamides are then used.

In pneumococcic pneumonia, 120,000 units daily for four to six days usually bring the infection under control. Bunn *et al*[52] have given penicillin

orally to patients with lobar pneumonia. An initial dose of 200,000 units followed by 50,000 units every two hours for seven days appears to halt inroads of the infection. It is well to bear in mind that pneumonia may not be pneumococcic in origin. In infants and in young children the influenzae bacillus (*H. influenzae*) may join the pneumococcus in producing bronchopneumonia. Such infections do not respond as expected with the use of penicillin. There are pulmonary infections caused by fungi, protozoa, rickettsiae, and filterable viruses, namely, histoplasmosis, toxoplasmosis, Rocky Mountain Spotted Fever and influenza. These infections do not respond to treatment with penicillin.

The treatment of post pneumococcic empyema should be governed jointly by internist and surgeon. Repeated thoracentesis may be done, reinjecting 15,000-30,000 units of penicillin. The objectives are sterilization of the exudate and obliteration of the space by re-expansion of the lung. In cases where the empyema fluid becomes sterile, there may be a delay in institution of surgical treatment to expand the lung. Surgery is always needed if the pleura becomes so thickened that the lung cannot re-expand.

Pneumococcic meningitis in infants and children is an extremely serious infection. It should be diagnosed quickly so that treatment can be started soon. Accurate bacteriological studies are imperative. The treatment of children by Hartmann[53] follows. Following collections of spinal fluid 20,000 units of penicillin in a volume of fluid somewhat less than that removed is injected into the arachnoid space; 10,000 to 20,000 units of penicillin is given intramuscularly. An initial subcutaneous dose of the sodium salt of sulfadiazine (0.5 per cent) is given subcutaneously. The sulfonamide is given along with ⅙ molar sodium r-lactate 30 cc. per kilogram body weight, if there are no signs or symptoms suggesting marked acid base balance change. Sodium lactate is used to produce an alkaline urine. Treatment is continued by subcutaneous injection of 0.1 Gm. per kilogram of sodium salt of sulfadiazine (0.5 per cent), every eight or twelve hours. Simultaneously with the administration of the sulfonamide ⅓ of the total potential alkali per 24 hours (10 cc. per kilogram of ⅙ M sodium lactate) is given. By this means high blood levels are attained quickly and perhaps precipitation of sulfonamide salts in the kidney tubule is prevented. Intrathecal and intramuscular injection of penicillin is continued. The number of times penicillin needs to be injected into the subarachnoid space depends on the examination of the spinal fluid, and the presence of pneumococci. Daily instillation of penicillin for one to eight days may be necessary. In some cases specific serum therapy may be needed to bring about arrest of the disease. Continued penicillin and sulfonamide therapy is necessary for ten days to two weeks or longer in less favorable cases. Sequelae such as hydrocephalus, epilepsy, and mental retardation, may be expected when infection occurs during infancy and early childhood and is not eradicated immediately[53].

Gonococcic infections. Among the infections caused by the gonococcus are arthritis, epididymitis and prostatitis in men, salpingitis and peritonitis in women, conjunctivitis and vaginitis in infants and children. This bacterium may cause endocarditis also. The gonococcus is very susceptible to the action of penicillin. Its *in vitro* sensitivity ranges between 0.002 to 0.176 units per cc. In uretheritis and vaginitis Romansky[31] cured 98 per cent of cases following a single intramuscular injection of calcium penicillin in beeswax and peanut oil. In uncomplicated cases 100,000 to 150,000 units of penicillin administered parenterally in divided doses will cure 90 to 98 per cent of all cases.

Penicillin is very effective in the treatment of gonococcic vaginitis and conjunctivitis in children. Infants with conjunctivitis may be cured with a total dosage of 50,000 units; 5000 units are given at three hour intervals. Vaginitis is treated with 100,000 to 125,000 units in fractional doses over a period of 24 to 48 hours.

Sulfonamides may not cure gonococcic infections. Some strains of gonococci become resistant to the action of sulfonamides. These cases may be treated successfully with penicillin. It is possible to induce resistance to penicillin in gonococci grown in the presence of increasing concentrations of the drug[25].

Experience has shown that in using penicillin to treat acute gonorrhea in patients who have been infected at the same exposure with syphilis, the latter may be masked and remain undetected for long periods.

Meningococcic Infections. Meningococcic infections respond satisfactorily as a rule to sulfonamides. Failure of the infection to respond favorably in 24 to 48 hours to the sulfonamides provides indication for the added use of penicillin. Patients receiving penicillin only may not do as well as with the use of sulfonamides.

Syphilis. The status of penicillin in the treatment of acquired syphilis has been reviewed recently by Dennie[54].

Congenital syphilis is a severe and complex disease and should be considered apart from the acquired syphilis of adults. In congenital syphilis there is a continual feeding of the spirochaetes to

the blood stream. The infection is massive[55] involves all organs, including bone. The infection is serious because of the rapid growth of tissues in the developing child. The most acute stages are seen during the first few months of life. During this period the mortality rate in untreated cases is high for two reasons, namely (1) the generalized syphilitic state is a forerunner of debility (2) and increased susceptibility of the infant to secondary infection.

Penicillin is effective in the prevention of prenatal syphilis, regardless of the duration of syphilis in the mother. Goodwin and Moore[56] propose the following minimum requirements. The total dose of penicillin is not less than 2.4 million units administered intramuscularly at two to three hour intervals night and day. The total duration of treatment should not be less than seven and one-half days. Following completion of penicillin treatment the mother should be followed clinically, and with quantitatively titered serologic tests at least once a month until delivery, as well as after the birth of the infant. A second treatment with penicillin should be given during pregnancy if there is (a) evidence of clinical or serologic relapse or (b) the original maternal serologic titer does not significantly decline within three months after treatment. In our present knowledge a pregnant syphilitic woman, although previously treated with penicillin should be treated again with penicillin in each succeeding pregnancy. The infant is followed for three to six months after birth by means of (a) physical inspection (b) quantitatively titered blood serologic tests, preferably every two weeks and (c) roentgenograms of the long bones taken at the first and sixth weeks of life.

The early treatment of infantile congenital syphilis with penicillin appears to be satisfactory. Final evaluation must wait for further data, specifically in respect to completeness of cure, and in general in respect to the efficiency of various fractions of penicillin[63]. Experience indicates that larger doses per kilogram body weight in infants are needed than that based on 2.4 million units for a 68 kilogram adult. If the latter dose is used 70 per cent of patients have their syphilitic infection arrested. Ingraham and associates recommend 75,000 units of penicillin per lb. body weight be given intramuscularly at three-hour intervals in a period not less than 15 days. Patients should be followed every month for the first six months, then at three month intervals for two years. Physical examination and quantitatively titered serologic tests should be carried out at each visit. X-rays of long bones are taken at the first and sixth week of life.

The treatment of late congenital syphilis is not satisfactory. Penicillin appears to be of no value in interstitial keratitis. No clinical improvement was observed by Wilkinson *et al*[57] in the treatment with penicillin of late congenital neurosyphilis.

Other Uses for Penicillin. Rat bite fever (*Spirillum minus*), anthrax, gas gangrene, among others respond favorably with the use of penicillin. Actinomycoses may be affected beneficially. Penicillin may be of value in treating diphtheria, but antitoxin should be used also, since penicillin is bacteriostatic and cannot affect circulating toxin. The use of penicillin in tetanus is not proved. Forgacs and Hutchinson[66] have reported on two strains of H. influenzae type b which were sensitive to penicillin. This drug has been used with some success in treatment of lung abscess, bronchiectasis and brain abscess. Careful consideration of its use in these conditions is desired, for surgical care may be delayed too long. Penicillin is a valuable drug in surgery particularly in controlling and preventing infections.

STREPTOMYCIN

Streptomycin is a more recent antibiotic than penicillin. Its field of usefulness has been tested by many clinical investigators under the direction of the National Research Council. The entire range of usefulness of this drug has not been adequately explored, but, existent knowledge in view, streptomycin is not as good as penicillin for at least two reasons, namely (a) it is more toxic, and (b) bacteria quickly develop resistance to its action.

Microorganisms that are susceptible to the action of streptomycin vary widely in their sensitivity. As noted earlier, many strains of organisms initially susceptible to 5 or 10 micrograms of streptomycin per cc. often acquire resistance *in vitro* to enormous amounts of this drug. It has also been shown that in the presence of blood or serum the tolerance of bacteria to streptomycin may be increased 4 to 8 times. It is desirable then to maintain a concentration of streptomycin in the blood 4 to 8 times that necessary to inhibit the bacteria *in vitro*[37].

Streptomycin is active against bacteria which have proved most resistant to penicillin, namely the gram negative bacteria. It is also effective against some gram positive bacteria (Table III).

Tularemia. Strepomycin is the best therapeutic agent in this disease. An average amount of 1.0 Gm. daily should be given by intramuscular injection for five to seven days. In the severe typhoidal and pneumonic forms 2.0 Gms. should be given daily for seven days or longer until the disease is brought under control[37,58].

Enteric Infections. Bacteremia: Streptomycin has been used successfully to treat bacteremia in which *Esch. coli, Proteus ammoneai,* and *Ps. aeruginosa* have been isolated by bacteriological methods. Many of the gram-negative bacilli invade the blood stream

from the genito-urinary tract. If streptomycin is able to control the focus of infection and offspring of sensitive strains do not develop resistance successful treatment is assured. Unfortunately in some of these cases the infection is chronic and treatment is difficult. Daily doses of 2.0 Gm. for a period of 12 days have been given in some of these infections[37].

Peritonitis. Streptomycin is useful in the treatment of peritonitis resulting from leakage of gastro-intestinal contents. Most cases, particularly peritonitis following appendicitis have received sulfonamides or penicillin, also, so that the usefulness of streptomycin alone is difficult to evaluate. Keefer *et al*[37] felt sufficiently encouraged from the accumulative experience in various clinics to recommend the use of streptomycin in all cases of peritonitis in which the offending organism is susceptible to its action. Streptomycin may be given intramuscularly 2.0 Gm. daily for five days or longer. Streptomycin can be injected directly into the peritoneal cavity.

Urinary Tract Infections. Streptomycin is a useful drug in the treatment of urinary tract infections[37,69] particularly when infection is of recent origin and the organism is a susceptible one. Results are not uniformly favorable. Complicated urinary tract infections of long duration in which the bacterial invaders are of mixed flora do not respond well to streptomycin. Finland and associates[59] have described the rapid development of resistance to streptomycin during treatment of urinary tract infections caused by various gram-negative bacilli. The appearance of resistant strains is a disturbing problem. The best results have been noted in infections due to *Proteus ammoneai* and *Ps. aeruginosa.* Strains of *Esch coli* may or may not respond well. The successful treatment of urinary tract infections may depend on administration of large doses from the beginning of treatment. The exact dosage is not known; 0.25 Gm. every six hours was not adequate in Finland's cases[59]. A large intake of fluid should be maintained and it is important that an effort be made to keep the urine alkaline[69]. In children receiving 0.02 Gms. per lb. body weight per day by intramuscular drip the concentration of streptomycin varied between 250 and 1000 units per cc. Most strains of gram-negative bacilli are responsive to this concentration of streptomycin.

Hemophilus infections. The two chief offenders in man are *H. influenzae,* and *H. pertussis.* Among the infections caused by the influenza bacillus are meningitis, laryngitis, otitis media, pericarditis, pneumonia and sepsis. Whooping cough is caused by *H. pertussis.*

Hemophilus influenzae infections are frequently severe. This organism causes meningitis in infants and young children. Prior to the use of sulfonamides almost all cases died. The sulfonamides helped, but the mortality rate was not strikingly reduced. In 1939 Alexander[60] prepared hyperimmune rabbits serum which is valuable in the treatment of this disease, particularly in older infants and young children. Streptomycin is now used in addition to these other forms of treatment. Despite these advances meningitis caused by *H.* influenzae, type b kills about 75 per cent of babies less than six months of age.

Alexander, Leidy, Rake and Donovick[61] treated 25 patients with streptomycin. The dose administered was 20,000 units (0.02 Gm.) per day given either by continuous intramuscular drip, in 240 cc. of isotonic saline, or by interrupted intramuscular injections in a concentration of 50,000 or less units per cc. The drug was administered intrathecally also. Injections were usually given once a day; the total intrathecal dose varied depending on the response of the patient (25,000-50,000 units).

Of the 25 patients 12 were considered mild cases. All recovered promptly using streptomycin; eight days was the average duration of treatment. Among nine severely ill cases five responded poorly and antiserum was necessary to bring about recovery. The remaining four responded poorly to sulfadiazine and serum; in these streptomycin was used with eventual recovery in three. In four very severe cases streptomycin, serum and sulfadiazine were used. All four recovered.

The following points are salient. Sensitive strains may develop resistance to streptomycin. Streptomycin is of value in the treatment of influenzal meningitis. Its beneficial effect seems to be augmentative to serum and sulfonamides. Streptomycin may be of value in the treatment of severe chronic cases which improve but are not cured by antiserum and sulfadiazine. Eighth nerve deafness may appear in patients treated longer than one week.

The treatment of pertussis occurring in man with streptomycin is promising; the disease course is shortened and less severe. The duration of the infective state is less prolonged as evidenced by the elimination of *H. pertussis* from the respiratory tract in the first week or so of the disease[64]. Bradford and Day[65] demonstrated the therapeutic effectiveness of streptomycin in murine pertussis prior to their use of this drug in human pertussis.

Tuberculous Infections. Although experimental studies[37,42] show that streptomycin inhibits the growth of tubercle bacilli, this antibiotic does not exert a rapidly curative effect in clinical tuberculosis. Streptomycin appears to have a place in the treatment of some forms of tuberculosis, but at this time it is not entirely clear just how effective

streptomycin is in all forms of tuberculous infection.

A number of patients with tuberculous meningitis have been treated with streptomycin. Some of these patients have apparently been cured, in others there is relief of symptoms. In this latter group tubercle bacilli can be found in the spinal fluid. Early diagnosis, confirmed by direct observation of tubercle bacilli and infection in guinea pigs, is desired for proper evaluation of results. Treatment may be instituted in rapidly progressive cases before the results of animal inoculation are at hand.

The treatment used by Hinshaw, et al[42], was 100-200 mg. of streptomycin intrathecally every 24 hours for two to six weeks and two to three Gm. intramuscularly daily for six months. A number of residual neurological disturbances have been noted among patients in whom the disease has been temporarily or permanently arrested. These are deafness, retrobulbar neuritis, ocular palsies, cerebellar dysfunction, and mental retardation.

It is hard to tell currently what the proper place of streptomycin is in the treatment of pulmonary tuberculosis. In general severe cases have been used for study. Since the natural course of pulmonary tuberculosis is erratic, the effect of treatment in these cases is difficult to define. It would appear in general that streptomycin has a beneficial effect on pulmonary tuberculosis. Further studies in progress in this country will settle the question within a short time.

Streptomycin has been used with good results in treating ulcerating tuberculous lesions of the respiratory tract. Tuberculous sinus tracts, usually secondary to tuberculosis lymphadenitis, have closed under treatment, but there has been recurrence when streptomycin was stopped. The treatment of tuberculous empyema has been disappointing. In renal tuberculosis palliative effects are noted. Arrest of renal tuberculosis has not been achieved with streptomycin.

Miliary tuberculosis, and other types of hematogenous tuberculosis respond favorably to streptomycin. In these cases, as those noted above, the dosage of streptomycin ranged from one to six Gm. daily, given intramuscularly. The minimum period of treatment, in respect to present knowledge, should be 90 to 180 days. Further data concerning streptomycin and tuberculosis will undoubtedly alter both dosage and duration of treatment.

SUMMARY

This review brings together somewhat summarily recent clinical and experimental observations concerning two antibiotic substances, penicillin and streptomycin. Penicillin, used first in crude form, has been explored in the treatment of infections more completely than streptomycin. Its field of usefulness is wider than that of streptomycin. In the past few years with further purification of penicillin, a number of fractions have been identified, known in this country as penicillin F, G, K, and X. Commercial penicillins consist almost entirely of penicillin G; some may contain appreciable amounts of penicillin X. Some of these fractions are more active against bacteria than others[62,63]. Further clinical and experimental observations will be needed to fully evaluate the place of these penicillin fractions in therapy.

Streptomycin is a valuable antibiotic, but in comparison with penicillin, it has a number of drawbacks. It is more toxic to humans and bacteria quickly develop resistance to it. These limitations have been amplified in the text.

The search for antibiotics is carried on in many places. Undoubtedly, there will be additional substances found which will prove valuable in the treatment of diseases caused by microorganisms insensitive at this time to antibiotics which are not harmful to the economy of the human cell mass.

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TYPHOID CARRIER STATE—TREATMENT BY CHOLECYSTECTOMY

Samuel L. Stout, M.D., Charles T. McCoy, M.D., and Harold Graber, M.D.

Wichita, Kansas*

Two of the earliest case reports of cholecystectomy for the typhoid carrier state are given in the A.M.A. Journal for April 26, 1913, by Thomas J. Leary, 1st Lt. M. C., U. S. Army, under the title, A Surgical Method of Clearing Up Chronic Typhoid Carriers. Both of his cases were in young men, soldiers who were under strict sanitary and medical control. The first was a man who had a chronic biliary fistula which alternately would close spontaneously, then have to be opened. After the fistula would close, the patient would have pain, fever, and a swelling of the gall bladder area. After being opened the symptoms would disappear and a clear mucoid material discharge for periods of days to weeks. After much treatment of various sorts, directed toward closing the fistula, had failed, a culture was made of the discharge which proved to be a pure growth of the typhoid bacillus. The stools were then cultured and found positive. The soldier had no history of clinical typhoid fever, but some years before had

*From the surgical service of Dr. James S. Hibbard, Sedgwick County Hospital.

been "unsuccessfully operated on for gall bladder stones" and later had a "drainage operation for empyema of the gall bladder." Surgical treatment was decided upon, and at operation he was found to have a stone impacted in the cystic duct, plus the external gall bladder fistula. The gall bladder and cystic duct were removed, the man made a good recovery and his stools became negative. Leary's second case was that of a soldier who had typhoid fever in the Philippine Islands in 1910, developed the carrier state and was treated many times in various ways, but persistently had positive stools. Finally in 1913 he was operated upon, at which time a distended gall bladder full of stones was removed. The contents of the gall bladder cultured out pure B. typhosus. This man also made a good recovery and his stools became negative.

The present case report is that of a white female in her middle thirties who was admitted to the Sedgwick County Hospital, Wichita, on January 17, 1947, with no complaints, but who stated that she was a typhoid carrier. Her initial trouble had started about a year ago with frank clinical typhoid fever. She was treated in a hospital for several weeks, became well, but her stools continued positive. She was finally dismissed under surveillance of the public health authorities, and recently moved to Wichita. Other past history was unilluminating. Physically she was healthy looking and not obese. There were no physical findings of interest. The urine was negative. The blood picture showed a variable white count of between ten and fifteen thousand at different times, and a sedimentation rate of 20 mm. in 60 minutes. The stool was positive for B. typhosus on several occasions. During her stay of almost a month before surgery she was treated variously with sulfasuxidine, methenamine, and penicillin, alone and in various combinations with no good result. X-ray examination on two separate occasions was reported as "non-visualizing gall bladder." Finally, on February 13, she came to operation. A right subcostal incision was used, as this approach has given better exposure in our experience and patients seem to have less postoperative pain with it. The gall bladder was small, thick-walled and contained a large number of small, many faceted stones. It was removed with ease, the stump of the cystic duct treated with phenol and alcohol and the wound closed without drainage. Silk was used throughout, with the exception of a single strand of fine catgut used to oversew the gall bladder bed. The anesthetic was ether, administered by the open drip method. A culture taken at operation from the gall bladder was positive for B. typhosus. The pathological report on the tissue was chronic ulcerative cholecystitis. The postoperative course was very benign, the highest postoperative temperature and pulse readings being 100.2 and 88 respectively. She was out of bed on the third day and the interrupted silk skin sutures removed on the eighth day without evidence of induration or inflammatory reaction around the sutures. Her stools remained positive for three weeks following surgery, and she was then given treatment with penicillin and sulfathiazole, following the recommendations of Comerford, Richmond and Kay, ("Typhoid Carriers Treated With Penicillin and Sulfathiazole",) in Lancet, 2:343, 1946. On March 13, and again on March 14, her stools were negative, and have remained so.

It is of course not possible to state unequivocally that her carrier state was relieved by surgery, for she was given other treatment following the operation, but it seems unlikely that medical treatment alone would have cured her, in view of the extensive pathology in the gall bladder, and experience has shown that surgery alone is effective in most similar cases.

Treatment of urticaria and allied dermatoses should begin with small doses of benadryl, such as 50 mg. administered three times a day. The amount should be increased gradually until the minimal maintenance dose has been determined. Conversely, patients may require 300 to 400 mg. a day for several weeks, but frequently are able to decrease the amount gradually until smaller doses become equally effective.

Benadryl does not seem to exert cumulative action, for urticarial lesions promptly reappear when administration of the drug ceases. If relief is not obtained within the first few days, benadryl is unlikely subsequently to be of value, and administration of it should be discontinued. In our eleven months' experience with benadryl, no manifestation of cutaneous sensitivity has been observed, nor is there any evidence to date that benadryl is a habit-forming drug. Benadryl has a wide margin of safety and can be taken for many months in succession without deleterious results. It is just as effective in controlling urticaria in the fourth or fifth month of use as it is in the first.

Indiscriminate use of benadryl should be discouraged because severe side reactions sometimes occur, such as loss of judgment, confusion, or the sudden onset of drowsiness.—Proceedings of the Staff Meetings of the Mayo Clinic, August 7, 1946.

Health, like freedom and wealth, cannot be given, but must be earned.—*Edward J. Stieglitz, M.D., A Future for Preventive Medicine.*

Many a maternity patient has received obstetric care in its most literal sense—that is, care which is focused only on her reproductive organs—and died from tuberculosis or diabetes or cancer soon after delivery.—*Hazel Corbin, R.N., Journal of Nursing, August, 1946*

CANCER OF THE CERVIX UTERI

Cancer of the cervix is far more frequent than is cancer of the fundus uteri. Yet cancer of the cervix accounts for four per cent of all cancer deaths while cancer of the body of the uterus accounts for six per cent of all cancer deaths. Earlier diagnosis in cancer of the cervix accounts for this discrepancy.

The first symptom of cancer of the cervix may not be a symptom but the discovery by the doctor at a routine pelvic examination of a suspicious area on the cervix. All women past the age of 35 should have pelvic examinations twice yearly. A speculum examination under a good light should be a part of this examination. If there are any suspicious areas on the cervix, biopsy should be done.

When infection, erosions, ulcerations, cystic change are found in the cervix, they should be treated as these lesions, in this location, may be precancerous. Postpartum and routine bi-yearly pelvic examinations have an important role in prophylaxis.

Abnormal bleeding and abnormal vaginal discharge are symptoms of cancer of the cervix. The bleeding is often postcoital or incidental to some other trauma and is often minimal in extent. Bleeding and abnormal discharge may be late symptoms. Urinary symptoms or frequency, burning or nocturia may be present.

Diagnostic measures include pelvic examination, including careful inspection of the cervix, and biopsy. If abnormal bleeding cannot be explained by the findings, diagnostic dilatation and curettage should be done to rule out a malignancy high in the cervical canal or in the fundus of the uterus.

Routine study of the vaginal secretion by the method of Papanicolaou may prove of great value in the early diagnosis of cancer of the cervix as well as corpus uteri.

The treatment of choice in cancer of the cervix is a combination of radium and x-ray therapy.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

While the general policies of the Kansas Medical Society are directed by the Council, composed of representatives elected by the delegates of each of the twelve councilor districts, the ideas back of these policies emanate from the twenty-six committees which are mandatorily appointed according to our constitution and by-laws.

In this issue of the Journal is a list of the personnel of these committees which have been selected after careful consideration. The duties of each committee are set forth in the constitution and by-laws. It is to be hoped that every chairman will realize the trust which has been placed in him to the end that he will call an early meeting of his committee and that each member will feel his obligation sufficiently to attend every meeting of his group.

There is an old adage which is apropos, "If two people exchange dollars, neither is richer; if two people exchange ideas, both are enriched." There is never a meeting of minds without this enrichment. Let us hope that the April 1948 issue of the Journal of the Kansas Medical Society will be filled with interesting activities of each and every committee.

The last twelve years have proved both the need and the value of improved social and political relationships between the Kansas doctors and the general public. We are awakening to our responsibilities as citizens, and while this does not diminish our duty in the continued advancement of scientific medicine, it indicates that we are also a social entity, both singly and collectively. It is certain that the time to continue to improve our relationships is now and always, thus making easier the work of our public policy committee.

L. S. Nelson

President.

EDITORIALS

Committees for 1947-1948

On the day following his installation as president, Dr. L. S. Nelson completed his committee appointments for the coming year. Weeks of planning preceded the final decision during which time Dr. Nelson consulted many Society members and in all instances the committee chairmen. Appointments have been made with several ideas in mind. Each doctor named on a committee was thought to have special information or special interest in that field. A second consideration was geographical distribution so that all sections of the state are represented on the various committees.

On Page VIII may be found the complete list of committee appointments for the coming year. Below are named the chairmen:

Allied Groups—O. W. Davidson, M.D., Kansas City.

Anesthesiology—P. H. Lorhan, M.D., Kansas City.

Auxiliary—C. O. West, M.D., Kansas City.

Child Welfare—B. I. Krehbiel, M.D., Topeka.

Conservation of Eyesight—W. M. Scales, M.D., Hutchinson.

Conservation of Hearing—J. N. Sherman, M.D., Chanute.

Constitution and Rules—A. W. Fegtly, M.D., Wichita.

Control of Cancer—H. E. Snyder, M.D., Winfield.

Control of Tuberculosis—G. B. Athy, M.D., Columbus.

Endowment—W. M. Mills, M.D., Topeka.

Executive—L. S. Nelson, M.D., Salina.

Expert Testimony—C. E. Joss, M.D., Topeka.

Hospital Survey—J. L. Grove, M.D., Newton.

Industrial Medicine—J. W. Spearing, M.D., Columbus.

Maternal Welfare—Porter Brown, M.D., Salina.

Medical Assistants—C. O. Merideth, Jr., M.D., Emporia.

Medical Economics—G. E. Kassebaum, M.D., El Dorado.

Medical Schools—Maurice Snyder, M.D., Salina.

Necrology—C. S. Huffman, M.D., Columbus.

Public Health and Education—D. D. Carr, M.D., Topeka.

Public Policy—J. L. Lattimore, M.D., Topeka.

Rural Health—C. M. Barnes, M.D., Seneca.

Stormont Medical Library—L. E. Eckles, M.D., Topeka.

Study of Heart Disease—P. W. Morgan, M.D., Emporia.

Venereal Disease—J. P. Berger, M.D., Wichita.

Veterans Administration Affairs—L. S. Nelson, M.D., Salina.

The Committee on Rural Health is listed for the first time. Appointed by Dr. Mills toward the close of his term of office, this committee remains as it was last year. It was originally appointed on the recommendation of the Council on Rural Health of the American Medical Association. From the A.M.A. came the request that each state society coordinate its rural health activities with those of the central organization. In Kansas, under the direction of Dr. C. M. Barnes, the committee will accomplish that and much more. A long, inspired agenda has been prepared, pointing toward activities that will be noticeable in every county of the state. The membership will hear more about this committee before the year is over.

Six committees have been eliminated this year. Dr. Nelson, in analyzing committee work, determined that certain committees could be combined to give all existing committees a larger sphere of activity. For instance, the Committee on Pharmacy has not been appointed, and this work will be directed by the Committee on Allied Groups. Dr. O. W. Davidson, chairman, has made elaborate plans and will shortly announce an outline of proposed activities, which will include cooperation not only with pharmacy but with all allied groups in the state.

The work on plasma will now be delegated to the Committee on Anesthesiology. This committee, under Dr. P. H. Lorhan, was organized last year and is now ready to expand its activities to where much more will be heard from them before the close of the fiscal year.

The Committee on Medical Schools has been enlarged to take in the responsibilities of the Committee on Postgraduate Study and the Committee on Scientific Work. Legal medicine will come under the Committee on Expert Testimony. Medical history is to be combined with the work of the Stormont Medical Library Committee.

Each of these committees has performed well and made many contributions to the Society. In the past, however, their work was limited to specific fields. Now, as a result of the combinations, each committee will have a larger responsibility and through the use of sub-committees will continue to carry on all activities that were separately listed in past years.

Dr. Nelson has high ambitions for committee accomplishments. He prepared a suggested agenda for each committee chairman and earnestly requests the active cooperation not only of each committee member but also of the entire Society. He will welcome, now or at any time, suggestions from the membership on ways in which committee activities

may be strengthened, and invites all members to consult with committee chairmen or with the Executive Office concerning problems in which they are interested.

K. P. S. Claims Office

Kansas Physicians' Service, in existence less than a year and a half, already boasts an enrollment of 35,000 members or more. Almost every practicing physician in Kansas has signed a contract agreeing to participate in this public service project of the Medical Society. Hundreds of claims are processed each month, and in many areas where enrollment has been concentrated physicians are discovering that a sizable portion of their income is now being received from Kansas Physicians' Service. As this program grows, and enrollment is being accelerated at present, this situation will become true in many other communities of the state.

Beginning without experience and with a minimum of actuarial data, the officers and Executive Committee of Kansas Physicians' Service worked diligently to make this plan successful. They built a stable program and have already enlarged benefits in several categories without increasing the cost to the member. As experience justifies additional increases in benefits, these will be made. Financially the corporation is sound. The public has accepted the plan with enthusiasm, and the members of the Society have been most cooperative. The outstanding difficulty up to the present has been the delay in processing claims, and that problem has now been corrected to where almost every claim will be completed within a matter of days.

At the meeting of the Council of the Kansas Medical Society on May 16, it was recommended that a claims office be set up by Kansas Physicians' Service, separate and apart from the executive office of the Kansas Medical Society. This office will be directed by Mrs. Margaret R. Foster. Mrs. Foster is ideally qualified for this position. During her years with the executive office she became well acquainted with many members of the Society. For the past six months a large portion of her time has been occupied with matters pertaining to Kansas Physicians' Service. On May 29 she was employed by the Executive Committee of Kansas Physicians' Service to be in charge of the new office, as recommended by the Council, and as of June 1 will devote her entire time to the processing of claims and handling of correspondence between Kansas Physicians' Service and the doctors participating in the program.

Claims will be mailed to the Crawford Building as before, where financial and membership records will be checked. Claims then will be forwarded to the newly created claims office where Mrs. Foster will process them. All regular claims will be recommended for immediate payment. When further information is needed, letters will be written to the physicians. Payments that can not be allowed and all cases in which a question remains will be forwarded to the medical claims consultant for professional analysis and a decision. A relatively small number of claims, those in which matters of policy determine the decision, will be delayed and brought before the Executive Committee.

The Kansas Medical Society will continue to cooperate with Kansas Physicians' Service as before. The new claims office will work with the Medical Society but will be operated and paid for by Kansas Physicians' Service, relieving the Medical Society of an expense it formerly donated to the new corporation.

E. M. I. C. Terminates

The Kansas State Board of Health announces the termination of the Emergency Maternal and Infant Care program, on June 30, 1947. After that date, no new maternity cases will be accepted. However, a child born under the program is eligible for services until he is one year old. Therefore, cases will be accepted for infants whose mothers were covered by the program at birth of the child, and will be authorized for care in cases of sickness, until the child is one year of age. For example, a child born in September of 1947 whose mother was an authorized case before termination of the program, June 30, 1947, will be taken care of at the existing rates until September of 1948.

The State Board of Health wishes to take this opportunity to thank the many practicing physicians who participated in the program, for without their participation the program would have been a failure. These physicians accepted cases as a part of their patriotic duty during a wartime emergency, when fees were high and there was a great personnel shortage. We know that many physicians refunded higher fees to accept fees at the E. M. I. C. rate when they realized that the patients were eligible for the program. Hospitals and physicians both exhibited unselfish attitudes in accepting and caring for these patients.

The Kansas State Board of Health has been interested in compiling some figures on the program. Many groups have asked for these figures and it is hoped that before long it may be possible to obtain them. The State Board of Health is interested in having comments from practicing physicians on the rules, regulations, pay rates, and administration of the program. Some physicians have felt that the program was responsible for the continued decrease in infant and maternal deaths,

while others have felt that it has had no effect. It is hoped by studying the statistics that we may be able to arrive at some conclusion.

As you know, the State Board of Health administered this program after it had been accepted by the Kansas Medical Society. Both the Medical Society and the Board of Health accepted the program as a patriotic duty. We both are happy to have participated in the program and hope we have been of some assistance during this great emergency.—*Division of Maternal and Child Health, Kansas State Board of Health.*

Kansas Hospitals for the Insane

The Journal is always pleased when interest in articles printed is sufficient to prompt replies in the form of "Letters to the Editor." It is only from such sources that the Editorial Board learns the type of material that is most interesting to Journal readers.

In February a series of short articles on state institutions was begun, the first being on the three Kansas hospitals for the insane. At that time the Journal presented an outline of methods of holding sanity hearings, legal arrangements to be completed before patients may be admitted, and requirements for admission and discharge of patients. No mention was made of the facilities of the hospitals, personnel employed, or funds available.

After the article appeared in the Journal, the editor received a letter from Dr. Willliam C. Menninger, Topeka, who presented statistics on conditions existing in the Kansas hospitals for the insane. Since this information will be of interest to readers of the Journal, the letter is reproduced here.

"I read with special interest the little story about the State Hospitals in the February issue of the Journal. I think this is a fine idea. I wish, however, for the individual who wrote it, that he might have had an opportunity to see the Kansas Legislative council studies entitled 'Psychiatric Facilities in Kansas.' This was in two parts publications 143 and 145, dated November, 1946.

"These set forth in a vivid, plain and straightforward fashion the fact that we in Kansas in our mental hospitals are pretty nearly at the tail end of the state hospital systems in the country. They point out that our commitment laws are atrocious and recommend some radical revisions. They indicate that we have an annual per capita maintenance expenditure of $244 in contrast to a national average of $366. It indicates that we spend $105 of this amount on salaries and wages in contrast to a national average of $198. We rank forty-sixth out of the forty-eight states on this particular point. Where the national standards are set at one physician to 150 patients we run one physician to 372 patients at the Topeka State Hospital, one to 743 at Larned and one to 855 at Osawatomie. We have three graduate nurses for the entire state hospital organization. No outpatient clinics are maintained and no social workers employed.

"In brief, this blasts us pretty badly and I know that there is a group that John Lattimore has called together to try to figure out ways and means of getting support from us psychiatrists for some legislation. I just wonder whether the doctors of the state shouldn't know these facts."

Osteopath Hospital Closed

Quintos W. Wilson, Wichita osteopath, was paroled for two years by District Judge J. N. Williams on a 60-day jail sentence, but his fine of $200 plus costs remained. The action was announced on May 16, and at the same time came news that the Southwestern Osteopathic Hospital in Wichita had been sold to H. N. Tihen, M.D., and other Wichita physicians.

Three years ago patients and employees at the Southwestern Osteopathic Hospital complained about surgery that was being performed by Wilson. When sufficient evidence had been obtained the county attorney took the matter before court and Wilson pleaded guilty to performing surgery without a license. The judge issued an injunction.

The State Board of Medical Registration and Examination worked closely with Wichita attorneys on the case and soon afterwards, discovering that Wilson continued his surgery, returned the matter to the courts. The district judge found that the defendant had violated his injunction and sentenced Wilson to 60 days in jail plus a fine of $200 and costs for contempt of court.

The case was taken to the Kansas Supreme Court where the decision was upheld. Subsequent activities remain somewhat obscure, but when the district judge prepared to invoke the sentence Carl I. Winsor, Wichita attorney assisting the prosecution, recommended a parole. The announcement was then made that the osteopathic hospital had been sold to a group of Wichita doctors of medicine, that the institution as such would be closed, that Wilson had been "helpful" in arranging the sale, and that he was leaving the state of Kansas.

The Kansas State Board of Medical Registration and Examination introduced a formal request that the court carry out the original sentence, but on the statement by the attorney employed locally for the prosecution, the jail term was withdrawn. However, the fine was ordered and the defendant placed on parole for two years.

Dr. Olin West Resigns

Dr. Olin West, who was to have become president of the American Medical Association at its annual meeting in Atlantic City this month, has resigned because of ill health. Dr. Edward L. Bortz, Philadelphia, vice president, was inaugurated in his place.

Dr. Bortz was born in Greensburg, Pennsylvania, in 1896. He has been a fellow of the American College of Physicians since 1929, and he received the certificate of the American Board of Internal Medicine in 1937. In 1942 he was made a member of the Council on Scientific Assembly of the A.M.A., and in 1945 he became its chairman. He became a delegate to the A.M.A. the same year.

88th ANNUAL SESSION

The Over-all Picture

Your editor has requested a report on the recent state meeting from an "outsider." Your ex-secretary is happy to report on a session as successful and as smoothly run as this meeting. To me it was the first truly post-war session with men in uniform conspicuously absent. Registered attendance was 1,142 including 555 physicians and 148 guests. In a busy year with hotel space at a premium, this was a creditable showing.

Monday, May 12, saw the usual gathering of golfers, trapshooters and hangers-on, climaxed by a banquet at the Topeka Country Club. These festivities add a day to an already crowded session, but the enthusiasm and large attendance are ample evidence that a day of relaxation without scientific programs is appreciated by a large part of the membership.

Meetings of the scientific session began Tuesday morning and were completed with only minor changes in the schedule by Thursday afternoon. These meetings, with the aid of the individualized round table lunches, offered a wide choice of opportunities in the theoretical and practical aspects of medicine in almost all fields. The Eye, Ear, Nose and Throat section ran concurrently in separate rooms throughout Tuesday and Wednesday with a good attendance at all meetings. Medical movies were shown almost continuously to good audiences from Tuesday morning to late Thursday afternoon. If there is any real criticism of the meeting it was the same as that of a three-ring circus, that there were too many things going on at once for any individual to take advantage of all that he would have liked.

The commercial exhibits with 60 booths arranged in a serpentine pathway leading to the scientific sections were crowded at nearly all times. One hundred twenty-six exhibitors were registered. There were, in addition, over 20 scientific exhibits prepared by individuals and organizations. These demonstrations of research offer a valuable field for further endeavor and may, in the future, warrant some type of subsidy. The Woman's Auxiliary of the Society met concurrently with the main session, and 170 members were registered. Preceding the session there was a successful meeting of the Kansas Medical Assistants' Society with 143 registered.

For entertainment, in addition to the program on Monday, there was the annual banquet at the local high school on Wednesday night, followed by an illustrated talk on the new Mexican volcano. There was no dance during this session. On Tuesday night two dinners were held, one for alumni of the University of Kansas and one for alumni of other schools. Both were well attended and excellent entertainment was furnished. After these meetings the Shawnee County Medical Society held open house in their rooms on West Eighth Street.

The first session of the House of Delegates was at 9:00 p.m. on Tuesday. Out of a possible total of 104 delegates, 62 were present. Thirty-nine component societies were not represented. At the second session, held at 4:00 p.m. on Thursday, 55 out of 104 delegates were present, leaving 43 societies unrepresented. It is hoped that certain constitutional changes regarding the time of these meetings which were adopted at this session can in some way help to correct this lack of interest. Reports of action taken in these meetings is reported elsewhere in the Journal. The plan of having all reports previously published and presented only in summary was again followed. This denies recognition to many hard-working councilors and committee chairmen, but saves time in an over-burdened meeting. Reports were presented for Kansas Physicians' Service and from the various state officers and delegates. A tribute was paid to those members and friends who were active in the recent legislative battle.

The thanks of the entire Society are due the Topeka membership for their hospitality and particularly to the chairmen of the committees whose hard work and thoughtful planning led to another successful meeting, culminating a year of progress for the Society. As long as Topeka and Wichita can stand the strain of sessions in alternate years, we are assured of excellent facilities for meetings, ample hotel space and committees who do far more than their share of the Society's work—*John M. Porter, M.D., Concordia.*

President's Address

It is customary for your president at this time to present a paper or address dealing with a scientific subject, a philosophical aspect of medicine, economic changes which affect the profession, a summary of recent achievements or some historical data concerning our organization.

Before entering on any of the above mentioned efforts, I wish to express to you my appreciation and sincere thanks for the privilege of serving as your president during the past year. It is the highest honor this organization can bestow and the title of president is a source of pride and gratification to any recipient. I wish now to express my gratitude for the uniform courtesy and cooperation received from all members and our permanent staff, and beg that the same consideration be extended to my very capable successor, President-elect Dr. Laurence S. Nelson.

We have had numerous administrative problems, all of which have been adjusted satisfactorily. These, in part, have concerned the development of Kansas Physicians' Service and the Kansas plan for medical service to veterans which are administered by two competent executive committees. These both have necessitated many special as well as the regular meetings at frequent intervals. I beg to mention one or two points that appear to deserve special attention. Your Board of Directors of Kansas Physicians' Service has given many hours toward planning this voluntary, non-profit, prepaid medical care plan for Kansas. That they planned well is borne out by the more than 30,000 persons enrolled in this program during the first fifteen months of its existence, of whom one-half have joined since the first of this year. And the plan is financially sound for the entire debt to the Kansas Medical Society has been paid and Kansas Physicians' Service is solvent today. We urge your continued support of this project because it is your program, because the public wants it and because it is the only constructive answer so far devised that is effective against the planners who would see the medical profession dominated by politically appointed federal employees.

The other major continuing public service project of the society is our program for veterans care. We are well aware of the problems and annoyances that are involved, of the changing regulations, the detailed reports and of the seemingly endless confusion. Much of this was foreseen as inevitable before the agreement was signed. In such a

program regulations are necessary but the service you can render to the veteran is of such value that these details appear petty by comparison. Those of us who believe that the veteran should be permitted to select his physician will continue to cooperate and we sincerely hope that you will recognize the importance of this work and assist your society in this project. There is also hope that many difficulties with reference to this program have been solved. As the doctor becomes more familiar with the regulations of the Veterans Administration, and as the veteran learns to understand our agreement, much of the difficulty can be erased. The Veterans Administration, through its leaders in Washington, its officers in St. Louis and its personnel in this state, has made a sincere effort to cooperate with us. To insure the success of this venture, which incidentally has become a model for the nation, the Veterans Administration has set up an office in Topeka whose sole duty is to assist the designated doctors in their program. If every participating physician in Kansas will deal directly through the Medical Service Center at Topeka with reference to details regarding this program, many of the misunderstandings can be avoided. This office coordinates our agreement with the Veterans Administration and should be utilized by all of us in dealing with cases authorized for medical care as well as examinations for rating purposes.

This year has seen our society installed in adequate and beautiful quarters for its central office, and we urge everyone to see our permanent home, 512 in the New England Building at Fifth and Kansas Avenues, diagonally across the street from the post office. Our state committees have functioned in an especially efficient manner and will be thanked at another time.

We have continued to provide financial aid to our doctors returned from service who wish to take postgraduate courses of instruction and have fostered similar courses at the School of Medicine, as well as throughout the state. Our ex-service doctors are now taking a most active part in every phase of medical practice and it should be our constant desire to see them assume an increasing responsibility in directing the affairs of the Kansas Medical Society.

The months preceding the legislative session in part and the entire three months of the session were occupied with the recurring biennial encounter to preserve high standards of medical practice in Kansas. The outcome was the most devastating defeat ever suffered by the opposition and, we believe, established the principle that a license issued by the Kansas State Board of Medical Registration and Examination will become prerequisite to the practice of medicine and surgery in Kansas. The return of medical officers from service reduced the previous critical areas in Kansas until now there remains no extended area nor any community of considerable population without resident medical care. This fact effectively rebutted the war time argument of lesser trained persons that their services were needed.

A second factor influencing the legislature at this session was the excellent quality of medical care being rendered by the members of our society. Community pride in the local doctor of medicine was frequently expressed by members of the legislature.

But beyond that, a large number of doctors took time to personally inform their representatives and senators of this problem. You doctors advised with the legislators regarding the importance of training, the value of standards and what this meant to the lives and health of the people. This, perhaps more than any one thing, influenced the result because your legislator usually knew how he would vote even before coming to Topeka. I wish to pay especial tribute to you members who assisted in this effort and will always recall with pride the uniform support you gave those of us who were charged more directly with the immediate responsibility at Topeka. The credit for this result belongs to the entire society as well as to a special planning committee. Of course, special commendation goes to our executive secretary and to a former president, now treasurer of this society, who happens to be a state representative from this community.

It has been a long time since any mention has been made of the meetings in the early days of the Kansas Medical Society so I would like to review briefly the early days of our society. The Kansas Medical Society was founded in 1859, eighty-eight years ago. In that same year John Brown left Kansas for the East and on October 17 raided the arsenal at Harper's Ferry, thereby providing the curtain raiser for the Civil War. It was not until 1861 that Kansas was given statehood and it was still the bloody battleground of pro and anti slavery forces in 1859.

The Kansas Medical Society was chartered by an act of the Territorial Legislature meeting at Lawrence on February 10, 1859.

The first section of the act provides that "Amory Hunting, S. B. Prentiss, J. P. Root and their associates and successors who shall be elected to membership as hereinafter provided, are hereby constituted a body corporate and politic by the name of the Kansas Medical Society, and shall have perpetual succession forever." The Supreme Court of Kansas in 1881 said that the territorial charter had not been nullified by admission to statehood, that the act only limited the life of the corporation to the end of all human affairs and the close of finite existence and that the medical society was endowed with perpetual succession or immortality. Hence a later law limiting the life of a corporation did not apply to our society.

We are the oldest corporation in Kansas and the only one with a perpetual charter which never has to be renewed.

Among the incorporators of our organization we find the name of Charles Robinson who later became governor of the state, the only physician to attain that honor.

The charter, among other more customary provisions, allows the society to make and enforce by-laws, also to impose and collect by lawful process fines up to $50 for violation of the by-laws.

Section 6 says: Said society shall issue certificates of membership to its members, and may also grant licenses to all respectable physicians, non-graduates, who shall on examination be found qualified for the practice of medicine and surgery or either, to practice those branches for which they are qualified.

The act is signed by A. Larzalere, Speaker of House of Representatives, C. W. Blalock, president of the Council, S. Medary, Governor of the Territory of Kansas.

The first meeting of our society with twenty-nine physicians present was held the same day the legislature passed the act, organization was effected and officers elected including Dr. S. B. Prentiss as president. A second meeting was held at the Eldridge House in Lawrence February 23, 1860, and a third, a year later, in the same place. Due to various catastrophic episodes including Quantrill's raid and the Civil War, there were no meetings until 1866 and it is interesting to note that in the minutes of this meeting a committee was appointed to confer with the Regents of the State University in regard to the establishment of a medical department thereto. It is probably correct that

the society entered on a continuous existence at this meeting and our meetings at one time were numbered consecutively from this date. It is interesting to find that the address of President C. A. Logan in 1866 is largely directed against patent medicines. He says, "True it is that false professors like false prophets require but a definite time to exhibit their unworthiness and work out their ruin, but the principle of quackery is a very phoenix, no sooner dying in one form than it is ready to rise again and take wing over more extensive plains and feast upon the fruitfulness of more productive fields." Our presidential addresses today are not quite so "literary."

Dr. O. D. Walker of Salina, while president over thirty years ago, recorded his recollection of these early officers and founders of the Kansas Medical Society. Dr. D. W. Stormont was the recording corresponding secretary of that term, as well as many to follow.

Quoting from Dr. Albert Newman's presidential address to our society in 1868, Transaction KMS, Vol I, pp. 99-100:

"Not long since in one of the daily papers of Lawrence (Lawrence Republican, T. Dwight Thacher, editor) appears the following modest local:

'A Surgical Triumph. We were shown yesterday an example of what is now called "conservative" surgery. One of the engineers employed by the Union Pacific Railway Company had his left hand severely crushed in coupling cars last October. Many surgeons would have unhesitatingly amputated it at the wrist. Dr. Wilder, of this city, however, took charge of the case, exsected the crushed bones of the hand, and succeeded in saving the third and fourth fingers in good condition, so that the man can still manage his engine and have considerable use of his hand.'

"I called upon the editor and directed his attention to what I considered an unjust and uncalled for aspersion upon the medical profession. I endeavored to show him that he was not sufficiently conversant with the principles of medicine to speak with any such positiveness as to what 'many surgeons' would do under any circumstances, and that particularly in this case, as he did not see it after the injury and before the operation, but only after several months had elapsed, it was impossible for him to know that 'many surgeons' would not have saved three fingers instead of two. In the course of our conversation, the editor stated that the reason for his using the language to which I objected, was that the doctor used a similar but stronger expression in explaining the case to him; that the doctor's language was 'that nearly every surgeon would have unhesitatingly amputated at the wrist.' A statement which certainly showed a very modest appreciation of his own skill, if not a very thorough knowledge of the general practice of surgeons. After a full discussion of the subject, the editor refused to admit that his language was in any respect unjust, and asserted in the most positive manner that he believed the statement was entirely true. I candidly confessed to him my great surprise at finding him so utterly incapable of appreciating the true relation which, as a journalist, he bore to the medical profession."

So we see that there were difficulties even in those far off days with some of the brother physicians who sought publicity in the press and with the editors who encouraged it.

Dr. W. L. Schenck, still living ex-president of 1878, said on an occasion similar to this that we need more state medicine and continues, "The state of Kansas has passed but one law for the prevention of disease and that was in the interest of her horned population." And he quotes a letter from Doctor Sinks at Leavenworth which says, "There is no board of health in this city . . . The hogs run at large in our streets and are the only scavengers . . . There is a health committee of the city council with the powers conferred upon cities of the first class. When a contagion prevails to an alarming extent, they do what the public demands. In other words, after the horse is stolen they lock the door."

This condition seems a far cry from modern sanitary science and health laws, yet it is in the professional life of one man.

Their only revolutionary medical discovery was anesthesia in that far off medical time—pre-Pasteur, pre-Lister, pre-Roentgen, pre-miracle drugs. How many of us could have done so well with tools so poor?

We can well take pride in the founders of our state society and be grateful for our rich heritage.

These pioneers of medicine in Kansas were interested in medical ethics, in their own professional improvement, in medical organization, in medical education, public health and medical investigation. Their aims and ideals should not be lost or regarded lightly, for they lighted a torch which has never gone out.—*W. M. Mills, M.D.*

Report of Journal Editor

The present Editorial Board of the Journal of the Kansas Medical Society took over with the issue for May 1946, and the members have been striving monthly to make the Journal a better scientific publication.

The Board has met one noon each month to discuss current problems and outline the policies of the Journal. Original articles are distributed for editing, often by two or more members of the Board, and final decision for acceptance or rejection of articles of questionable value has been put to a vote of the Board as a whole.

First class scientific articles continue to be the major problem of the Editorial Board. For one issue we were so low on scientific articles that we had to beat the bushes for articles and practically had no choice except to accept and publish those articles that we could get. It is sincerely hoped that during the next year worthwhile articles will become so plentiful that we can increase the number of scientific pages in the Journal.

During the past year the Editorial Board saw the need for and sanctioned the publication of a roster of the members of the Kansas Medical Society, which was mailed to you in August 1946. We have received many favorable comments on this issue. It is not the intent of the Board, however, to make this a yearly event. The roster was published as a starting point for the Kansas Medical Society to continue or delete as they see fit.

In March 1947, the first annual University of Kansas School of Medicine number of the Journal of the Kansas Medical Society appeared. It is the desire of the present Editorial Board that this University of Kansas School of Medicine number be continued through the years to come as a tribute to the members of the medical staff who, in the past, have contributed so many worth while articles for publication.

The Editorial Board is desirous of receiving comments concerning the Journal, critical or otherwise, and will welcome any suggestions which will make it a better publication.

The Editorial Board is most grateful to Miss Pauline Farrell, our managing editor, for her fine work, many suggestions and faithful cooperation. We are deeply indebted

to Oliver Ebel, our executive secretary and business manager of the Journal, for his many editorials and counsel. We are also indebted to the many physicians of Kansas and the guest speakers of past medical meetings for their contribution of scientific articles for publication.

And last, but not least, we are indebted to those firms who have seen fit to purchase advertising space in the Journal. We sincerely hope that those advertisements have paid dividends, for without this source of income the Journal could not exist without financial aid from the Society.—*Lucien R. Pyle, M.D.*

First Session, House of Delegates
May 13, 1947

The meeting opened with the call to order by the president, Dr. W. M. Mills.

Reading of the minutes was waived by unanimous consent and the minutes printed in the Journal of the Kansas Medical Society were accepted as printed.

Dr. A. W. Fegtly announced a quorum present.

Mr. Blake Williamson was introduced and gave a brief account of the activities of the last legislature. He stated that one of the biggest needs in Kansas today, in his opinion, is to interest doctors in going into the smaller communities. Hospitals which are equipped to train interns should be allowed to do so. He paid a fine tribute to Dr. J. L. Lattimore for the splendid work he did in the legislature. The victory won in this year's legislature, he said, is due in a very large part to his efforts and those of many physicians in their own communities. In discussing the State Board of Medical Registration he mentioned the debt that Kansas medicine owes to Dr. J. F. Hassig and commented on his sacrifices to uphold the standards of medical practice in this state.

A standing vote of thanks was offered to Mr. Williamson for the many things he has done for Kansas medicine.

Dr. John M. Porter briefed the councilor reports and Dr. Milton B. Miller reported on committee activities.

Suggested amendments to the by-laws were read by Dr. A. W. Fegtly, these having previously been printed in the Journal. These were tabled until the second meeting. It was moved and duly seconded to re-print the by-laws since many amendments have been added. Motion carried.

In the absence of Dr. Conrad M. Barnes, the chairman of the newly created Committee on Rural Health, Dr. L. E. Beal read a report submitted by that committee. This was referred to the second meeting of the House of Delegates.

Dr. W. M. Mills reported briefly on the activity of the Committee on Veterans' Affairs.

Dr. Barrett A. Nelson reported on the activities of Kansas Physicians' Service. At the annual meeting of the Board of Directors, Dr. Dwight Lawson was elected secretary-treasurer, the office formerly held by Dr. W. M. Mills. The affairs of the national organization, Associated Medical Care Plans, Inc., were described.

In the absence of Dr. L. R. Pyle, editor, Dr. Dwight Lawson read the report of the Editorial Board of the Journal of the Kansas Medical Society.

The report of the executive secretary was read by Mr. Oliver E. Ebel.

Dr. W. M. Mills extended an invitation received from Miss Louise McNeal to visit the new Stormont Medical Library in the State House.

The report of the constitutional secretary was presented by Dr. John M. Porter, showing present membership to be 1,509 paid, service and honorary members.

Because the auditors' report had not been completed, Dr. J. L. Lattimore, treasurer, asked to be allowed to present his report at the second meeting.

Resolutions were read by Dr. John M. Porter as follows:

The Oklahoma State Medical Society recommends the discontinuance of hospital staff meetings during the summer months. Oklahoma delegates will introduce this resolution at the House of Delegates of the American Medical Association, and their society requests Kansas to support the action. This resolution was tabled until the second meeting.

The Colorado State Medical Society presented two resolutions, one regarding the proposed change of policy of American specialty boards, the other referring to clarification of rules relating to medical service fees received from the federal government. These resolutions were tabled until the second meeting.

Brief reports on the winter meeting of the American Medical Association were given by Dr. J. F. Hassig and Dr. F. L. Loveland.

Brief messages were given by the president and president-elect.

It was announced that councilors from districts 4, 5, 9 and 11 must be elected, and members from those districts were asked to prepare elections to present to the second meeting.

Dr. Henry N. Tihen, as chairman of the Public Policy Committee, commented on the fine work done by Clarence G. Munns in the matter of public relations.

The following resolution was presented by Dr. Henry N. Tihen:

"WHEREAS: The Kansas Medical Society through its component county societies, has raised a sum of money by volunteer subscription, allocated for the specific purpose of aiding Kansas returned service physicians of World War II in defraying expenses of refresher or postgraduate courses, and

"WHEREAS: Certain physician service men belonging to this Kansas Medical Society have lost their lives while in service,

"BE IT RESOLVED: That the House of Delegates hereby authorize and instruct the committee in charge of this fund to make available to the widows of these deceased service physicians, upon petition or otherwise, a sum equivalent to the proportionate amount which would have been available to these physicians for refresher or postgraduate work."

This resolution was referred to the second meeting of the House of Delegates. There being no further business, the meeting adjourned.

Second Session, House of Delegates
May 15, 1947

The meeting was called to order by the president. After Dr. A. W. Fegtly reported a quorum present, the meeting proceeded.

Under unfinished business, the amendments suggested by the Committee on Constitution and Rules were presented for vote.

The amendment to the By-Laws, Chapter X, Editorial Board, Section 7, changing the manner of disbursing Journal funds and the signing of checks, was approved.

Amendment to By-Laws, Chapter V, House of Delegates, Section 1, declaring that two meetings must be held on

separate days rather than requiring that they be on the first and last days as at present, was approved.

Amendment to By-Laws, Chapter V, House of Delegates, Section 17, limiting the term of office of AMA delegates to six years, was not approved.

The resolutions which had been read at the first meeting were briefed and voted upon. The resolution offered by the Oklahoma Medical Society regarding hospital staff meetings during summer months was rejected. The resolution presented by the Colorado State Medical Society concerning a change in policy of American specialty boards was approved. The second resolution presented by Colorado concerning a clarification of rules relating to medical service fees received from the federal government was rejected.

The resolution presented at the first meeting regarding authorization of funds to be given to the widows of Kansas service physicians was approved.

The treasurer's report was read by Dr. J. L. Lattimore, and a vote of thanks was extended to him for his fine service.

Regarding the committee reports read at the first meeting, it was moved and duly seconded that these reports be scrutinized and acted upon by the Council. Motion carried.

The next order of business was election of officers.

Dr. O. W. Davidson was nominated as president-elect. It was moved, duly seconded and carried that the nominations be closed and the secretary be instructed to cast a unanimous ballot.

Dr. J. H. A. Peck was nominated as first vice president; it was moved, duly seconded and carried that the nominations be closed and the secretary be instructed to cast a unanimous ballot.

Dr. F. R. Croson was nominated as second vice president; it was moved, duly seconded and carried that the nominations be closed and the secretary be instructed to cast a unanimous ballot.

Dr. Dale D. Vermillion was nominated as constitutional secretary; it was moved, duly seconded and carried that the nominations be closed and the secretary be instructed to cast a unanimous ballot.

Dr. J. L. Lattimore nominated Dr. Henry S. Blake for treasurer and Dr. L. F. Barney nominated Dr. J. L. Lattimore for treasurer. The tellers announced Doctor Lattimore elected and it was moved, duly seconded and carried to make the vote unanimous.

Dr. F. L. Loveland nominated Dr. John M. Porter as delegate to the American Medical Association for a term of two years. It was moved, duly seconded and carried that the nominations be closed and the secretary be instructed to cast a unanimous ballot.

The next order of business being the election of councilors, the representatives from the councilor districts involved were asked to report their elections. There was considerable discussion of the proper interpretation of the length of time which can be served by a councilor elected to fill an unexpired term. It was ruled that the intent of the Constitution was that no councilor should serve more than six years. Therefore, if councilors are re-elected after having served part of an unexpired term in addition to a full term, they must be prepared to resign after serving six years. Upon this premise, the president asked for announcement of election of councilors. The following were named:

District 4—Dr. Frank Foncannon to serve two more years.

District 5—Dr. L. J. Beyer to serve a three-year term.

District 9—Dr. Dale Vermillion to serve a three-year term.

District 11—Dr. J. R. Campbell to serve two more years.

The first meeting of the Council was announced to take place immediately after the close of this meeting.

Dr. L. S. Nelson was then installed as president for the coming year and paid a fine tribute to Dr. W. M. Mills for his splendid service during the past year.

A vote of thanks was offered to the Shawnee County Medical Society for a fine meeting.

There being no further business, the meeting was adjourned.

Eye, Ear, Nose and Throat Society

At a meeting of the Kansas Eye, Ear, Nose and Throat Society held during the annual meeting of the Kansas Medical Society, Dr. Clifford J. Mullen, Kansas City, was named president for the coming year and Dr. Byron J. Ashley, Topeka, was elected secretary.

Psychiatric Society

The Kansas Psychiatric Society announces the following officers for the coming year: president, Dr. Lewis L. Robbins, Topeka; vice president, Dr. J. F. Casey, Topeka; secretary-treasurer, Dr. Edward D. Greenwood, Topeka; counsellors, Dr. E. M. Wiedenmann, Topeka, and Dr. Paul E. Davis, Parsons.

Obstetrical and Gynecological Society

Dr. Howard C. Clark, Wichita, will serve as president of the Kansas Obstetrical and Gynecological Society this year and Dr. Clyde O. Meredith, Jr., Emporia, will be secretary of the organization.

Kansas Heart Association

The Kansas Heart Association, composed of a group of members of the Kansas Medical Society, was officially organized at a meeting held on Wednesday, May 14. By-laws were drawn up and officers were elected.

Dr. Philip W. Morgan, Emporia, was named president. Other officers are Dr. Fred J. McEwen, Wichita, vice president; Dr. Don C. Wakeman, Topeka, secretary-treasurer; Dr. Eugene D. Liddy, Lawrence, delegate to the American Heart Association.

For some time it has been felt that the overall plans of the American Heart Association could best be carried out through a local organization, and several years ago a group of Kansas physicians who had taken a course arranged by the Society's Committee on the Study of Heart Disease called themselves the Kansas Heart Association. No formal organization was maintained, however, and those present at the meeting last month agreed that they could best extend the objectives of the committee to all physicians in the state interested in heart disease through an established society. Plans for the coming year will be outlined after the meeting of the American Medical Association and the American Heart Association.

Golfing and Trapshooting Tournaments

Sportsman members of the Kansas Medical Society enjoyed their annual golf tournament and trapshoot in Topeka on Monday, May 12. At a short business session, the following officers were elected: president, Dr. H. P. Jones, Lawrence; vice president, Dr. R. R. Sheldon, Salina; secretary, Dr. J. W. Shaw, Wichita; directors, Dr. W. K. Hobart, Topeka; Dr. J. L. Wentworth, Arkansas

City, and Dr. L. L. Cooper, Fort Scott; chairman of trapshoot, Dr. W. A. Smiley, Jr., Junction City.

Winners in the golf tournament at Topeka Country Club were: first low gross, Dr. Glen Ashley, Chanute, 77; second low gross, Dr. Ed Ashley, Chanute, 78; third low gross, Dr. R. R. Sheldon, Salina, 80; first low net, Dr. A. P. Cloyes, El Dorado, 59; second low net, Dr. H. L. Barry, Wichita, 61; third low net, Dr. C. C. Parmley, Wichita, 64. In the nine hole flight Dr. Les Saylor and Dr. B. I. Krehbiel, both of Topeka, tied for low gross with scores of 47, and Dr. Paul Powell, Topeka, had low net, 33.

Dr. W. G. Brown, Paola, won first in the trapshoot with a 91, followed by Dr. W. A. Smiley, Sr., Junction City, and Dr. G. L. Gill, Sterling, with scores of 88.

Prizes for the sports events were donated by the following firms: Capitol Sporting Goods Company, Farnsworth Laboratory, Goetze-Niemer Company, Schering Corporation, American Optical Company, Pitman-Moore, Sharp and Dohme, Eli Lilly and Company, Ciba Pharmaceutical Products, Philip Morris and Company, Munns Medical Supply Company, Commercial Casualty Insurance Company, Quinton-Duffens Optical Company, Mead Johnson and Company, William F. Merrell Company, Gerber Baby Foods Company, Siebrandt Manufacturing Company, Davis and Geck, Riggs Optical Company, and W. E. Isle Company.

Cancer ranked second as a cause of death in 1945 when sex and age were not considered, according to a chart released by the Division of Public Health Statistics in Kansas Cancer Notes for March, 1947. Among females, cancer ranked first as a cause of death in all age groups between the ages of 30 and 64.

Officers and Councilors

Printed below is a list of the officers and councilors of the Kansas Medical Society who will comprise the governing body of the Society during the next fiscal year.

President, Laurence S. Nelson, M.D., Salina

President-elect, O. W. Davidson, M.D., Kansas City

Past President, W. M. Mills, M.D., Topeka

First Vice President, J. H. A. Peck, M.D., St. Francis

Second Vice President, F. R. Croson, M. D., Clay Center

Secretary, D. D. Vermillion, M.D., Goodland

Treasurer, J. L. Lattimore, M.D., Topeka

AMA Delegate 1945-1947, F. L. Loveland, M.D., Topeka

AMA Delegate 1947-1949, Philip W. Morgan, M.D., Emporia

AMA Delegate 1948-1950, John M. Porter, M.D., Concordia

COUNCIL

First District, R. T. Nichols, M.D., Hiawatha
Second District, L. G. Allen, M.D., Kansas City
Third District, C. H. Benage, M. D., Pittsburg
Fourth District, Frank Foncannon, M.D., Emporia
Fifth District, L. J. Beyer, M. D., Lyons
Sixth District, Warren F. Bernstorf, M.D., Winfield
Seventh District, R. R. Cave, M.D., Manhattan
Eighth District, Ben H. Mayer, M.D., Ellsworth
Ninth District, D. D. Vermillion, M.D., Goodland
Tenth District, Murray C. Eddy, M. D., Hays
Eleventh District, John R. Campbell, M.D., Pratt
Twelfth District, G. R. Hastings, M.D., Garden City

Schedule of Refresher Courses

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in cooperation with
THE KANSAS MEDICAL SOCIETY
and the
KANSAS STATE BOARD OF HEALTH

September 9-11, 1947.....Anesthesiology
October 20-23, 1947.....Tuberculosis
November 17-20, 1947.....Obstetrics and Gynecology
December 8-10, 1947.....Physical Medicine
January 19-21, 1948.....Radiology and Cancer
February 16-19, 1948.....Internal Medicine, Psychiatry and Dermatology
March 15-17, 1948.....Surgery
April 12-15, 1948.....Pediatrics and Public Health
May 3-7, 1948.....Ophthalmology and Otolaryngology
May 25-27, 1948.....Nursing Education and Hospital Administration

The program of postgraduate courses for the year starting July 1, 1947, also includes a Continuation Course on SURGICAL PATHOLOGY, meeting for the full day on Thursdays, for a term of twelve weeks starting on September 25. Continuation Courses in other subjects will be announced for later dates; also a Circuit Course on PSYCHOSOMATIC MEDICINE will be offered in five different centers of the state in November—definite dates to be announced soon.

Editorial Board

The affairs of the Journal of the Kansas Medical Society will be administered during the coming year by seven physicians, five from Topeka who will serve as members of the Editorial Board, and two from other parts of the state who will be associate editors. The complete list is as follows:

Lucien R. Pyle, M.D., Editor, Topeka
John W. Cavanaugh, M.D., Topeka
Orville R. Clark, M.D., Topeka
Dwight Lawson, M.D., Topeka
Don C. Wakeman, M. D., Topeka
C. A. Hellwig, M.D., Wichita
James B. Weaver, M.D., Kansas City

Kansas Physician's Service

Officers and directors of Kansas Physicians' Service for the 1947-1948 year are as follows:

President, Barrett A. Nelson, M.D., Manhattan
Vice President, John L. Lattimore, M.D., Topeka
Secretary-treasurer, Dwight Lawson, M.D., Topeka
Executive vice president, Oliver E. Ebel, Topeka

DIRECTORS

Conrad M. Barnes, M.D., Seneca
C. H. Benage, M.D., Pittsburg
W. F. Bernstorf, M.D., Winfield
R. R. Cave, M.D., Manhattan
Athol Cochran, M.D., Pratt
O. W. Davidson, M.D., Kansas City
Frank Foncannon, M.D., Emporia
J. L. Grove, M.D., Newton
G. R. Hastings, M.D., Garden City
O. A. Hennerich, M.D., Hays
Holmes Meade, Topeka
W. M. Mills, M.D., Topeka
L. S. Nelson, M.D., Salina
E. M. Sutton, M.D., Salina
M. F. Trued, Topeka
D. D. Vermillion, M.D., Goodland

Orthopedists Announce Change

A change in general qualifications for eligibility to the examination of the American Board of Orthopedic Surgery has been announced by the secretary of the board, Dr. Francis M. McKeever, Los Angeles.

After January 1, 1951, all candidates applying for Part 1 of the examination must have the following general qualifications: (1) he must be a citizen of the United States or Canada; (2) he must be a graduate of a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association; (3) he must have served an internship of 12 months in a general hospital acceptable to the board; (4) he must have spent a year on an approved surgical residency subsequent to the completion of his internship. No individual may apply for Part I of the examination if he has not completed at least one year in special orthopedic training in addition to meeting the general requirements.

The board has provided an exemption under the second classification above for those whose training has been received outside the United States or Canada. Such an applicant must present satisfactory credentials to the Council on Medical Education and Hospitals and to the National Board of Medical Examiners, and must have been engaged in the practice of orthopedic surgery in the United States and Canada for at least three years prior to submission of his application.

Complete information on Part I and Part II of the examination may be secured from the secretary of the board, 1136 West 6th Street, Los Angeles 14, California.

Indiana Requires Registration

The state of Indiana recently passed a law requiring annual registration of physicians, to become effective July 1, 1947. The licenses of those who do not comply with the law will be revoked, so the Indiana State Board of Medical Registration and Examination is taking this means of advising physicians who hold licenses in Indiana that they must register. Complete information may be secured from the Indiana board, 416 K. of P. Building, Indianapolis 4, Indiana.

COUNTY SOCIETIES

The Reno County Medical Society held a dinner meeting on May 7 with Dr. Robert H. Riedel, of the Kansas State Board of Health, as speaker. Dr. Riedel discussed cancer registry and cancer clinics in Kansas. New officers of the Reno County Society are as follows: president, Dr. Irl E. Hempstid; vice president, Dr. E. L. Fitzgerald; secretary-treasurer, Dr. John Jarrott.

* * *

A group of 40 doctors from northeast Kansas held a meeting at the Sabetha country club on April 24. Dr. Paul Shafer, assistant professor of surgery at the University of Kansas School of Medicine, spoke on "Newer Concepts of Peptic Ulcers," and Dr. John L. Lattimore, Topeka, discussed medical economics.

* * *

Members of the Marshall County Society and members of the Auxiliary in that county held a joint dinner meeting in Waterville on May 8. A business session in the office of Dr. D. M. Diefendorf folowed the dinner.

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Dr. Hobart Allebach of Kansas City, formerly of Ottawa, was guest speaker at a meeting of the Franklin County Society held at Ottawa April 30.

* * *

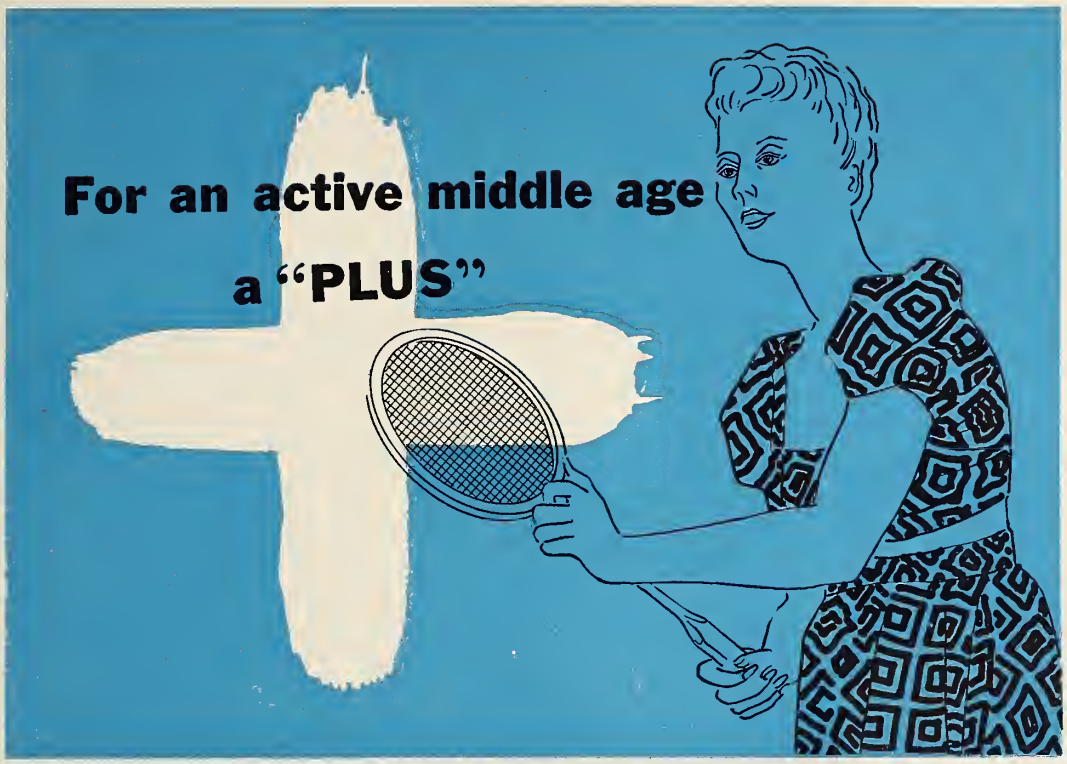
A joint meeting of the Stafford County Medical Society and Auxiliary was held at the home of Dr. and Mrs. W. L. Butler, Stafford, May 19. A covered dish dinner was served, after which there was a social hour.

* * *

A meeting of the Anderson County Society was held May 16 at Manners' Inn, Garnett. The construction of a county hospital received approval of the group, and suggestions were made for the operation of a hospital if a proposed bond issue is passed.

* * *

The April meeting of the Crawford County Society was held on the 24th at Pittsburg. Dr. C. W. Erickson told of the postgraduate course he recently completed at the University of Michigan, and Dr. C. B. Newman, Dr. E. J. Schulte and Dr. Paul B. Leffler discussed malaria conditions observed overseas while in military service.



The "sense of well-being" so frequently reported by patients following "Premarin" therapy often means the difference between an active, enjoyable middle age and a sedentary one. Not only prompt relief from distressing menopausal symptoms but also a brighter mental outlook which may be translated into a desire "to be doing things"...such are the results which may usually be expected following "Premarin" administration . . . therapy with a "plus."

"Premarin" provides effective estrogenic therapy through the oral route with comparative freedom from untoward side effects.

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Tablets of 2.5 mg.....bottles of 20 and 100.
Tablets of 1.25 mg.....bottles of 20, 100 and 1000.
Tablets of 0.625 mg.....bottles of 100 and 1000.
Liquid, containing 0.625 mg. in each 4 cc. (1 teaspoonful).....bottles of 120 cc.

While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens . . . estradiol, equilin, equilenin, hippulin . . . are also present as water-soluble sulfates. The water solubility of conjugated estrogens (equine) assures rapid absorption from the gastrointestinal tract.

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MEMBERS

Dr. H. L. Graber, assistant superintendent of the Sedgwick County Hospital, Wichita, for the past year, has begun practice in Nickerson.

* * *

Dr. L. L. Saylor, who has been a resident in surgery at Hines General Hospital, Chicago, for the past year, has returned to practice in Topeka.

* * *

Dr. Ralph I. Canuteson, Lawrence, attended the third national conference on health in colleges in New York early this month, and served as chairman of the planning committee for the conference.

* * *

Dr. J. H. A. Peck, St. Francis, attended a meeting of the American College of Surgeons in Winnipeg, Canada, last month and appeared on the program.

* * *

Dr. A. K. Owen, Topeka, was recently elected to emeritus fellowship in the American College of Radiology.

* * *

Dr. Balthasar A. Brundardt, Salina, has announced that his son, Dr. Bernard A. Brungardt, is now associated with him in practice. The younger Dr. Brungardt was graduated from the Creighton School of Medicine and completed his internship at St. Catherine's Hospital in Omaha.

* * *

Dr. M. W. Wells, who has been practicing in LeRoy, is closing his office there and has not announced plans for the future.

* * *

Dr. John D. Green, McPherson, announces that he is now associated in practice with Dr. Robert P. Watterson, a graduate of the Iowa University Medical School. Dr. Watterson was recently released from the Navy after having served since 1942, 20 months in the Pacific as a flight surgeon.

* * *

Dr. C. J. Bliss, Perry, has been named Jefferson county health officer.

* * *

Dr. J. N. Carter, who has been practicing in Garnett, is moving to Ottawa. He will retain his office in Garnett, however, and will be assisted in practice there by Dr. David Laury, a graduate of Northwestern University School of Medicine.

* * *

Dr. G. W. Wright, who has been practicing in Webb City, Missouri, during the past year, has returned to Neodesha and is resuming his practice there.

* * *

Dr. G. B. Sekavec, who has been practicing in La-Crosse, has moved to Oakley and has opened an office there.

* * *

Dr. Lennel Wright, Wichita, has opened an office in Haysville, 10 miles south of Wichita, and will practice there one or two days each week.

* * *

Dr. J. C. Ulrey, St. John, has been reappointed Stafford county health officer.

Dr. Leon Zimmerman, who is on terminal leave from the Army, is taking a postgraduate course in eye work in Portland, Maine, before returning to his practice in Liberal.

* * *

Dr. William C. Menninger, Topeka, was named president of the American Psychiatric Association at a meeting held in New York last month. He will take office in 1948.

DEATH NOTICES

JOHN DRYER GREEN, M.D.

Dr. John D. Green, 44, died May 11 in McPherson. A graduate of the University of Nebraska College of Medicine in 1931, he practiced first in China, spending six years in that country. He returned to the United States in 1938 and spent the next two years in postgraduate work in surgery, opening an office in McPherson in 1940. He was a member of the McPherson County Medical Society.

* * *

OTTO B. KIEHL, M.D.

Dr. Otto B. Kiehl, 67, who had practiced in Pittsburg for 40 years, specializing in pediatrics, died at his home there May 10. He was graduated from the University of Kansas School of Medicine in 1907 and took postgraduate work at Harvard and at schools in Germany and Austria. He was a member of the Crawford County Medical Society and had served as president of that group.

* * *

LEROY S. S. OTT, M.D.

Dr. Leroy S. S. Ott, 59, an honorary member of the Finney County Medical Society, died at his home near Longdale, Oklahoma, May 4. After his graduation from the Kansas Medical College, Topeka, in 1910, he spent two years as surgeon for a mining company in Colombia, South America, and then returned to Kansas. He had practiced here since that time, in Mayetta, Tribune, Fort Dodge and Leoti, until his retirement two years ago. During World War I he served in the Army Medical Corps.

* * *

SANFORD BAILEY, M.D.

Dr. Sanford Bailey, 75, a member of the Finney County Medical Society, died April 28 at Garden City. He had been practicing since 1893, and had been in Kansas since 1910. He was graduated from the Kentucky School of Medicine, Louisville, in 1893 and practiced in Kentucky for seven years before opening an office in Lakin. In 1914 he moved to Garden City, continuing practice there until his death, except during World War I when he served in the Army Medical Corps.

* * *

MAYER SHOYER, M.D.

Dr. Mayer Shoyer, 71, a member of the Jackson County Society, died April 5 at his home in Holton. He had practiced there for many years and at the time of his death was serving as county physician. A graduate of the University Medical College of Kansas City in 1897, Dr. Shoyer practiced in Soldier before moving to Holton.

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July 9, 10, 1947

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Nine Distinguished Guest Speakers

FRANK ADAIR, M.D., New York, President, American Cancer Society.

EDWIN C. ERNST, M.D., of Barnes Hospital, St. Louis;

CHARLES HUGGINS, M.D., of the University of Chicago;

JOE VINCENT MEIGS, M.D., of Vincent Memorial Hospital, Boston;

HUGH J. MORGAN, M.D., of Vanderbilt University, Nashville.

A. W. OUGHTERSON, M.D., New York, Medical Director, American Cancer Society;

HARRY C. SOLOMON, M.D., of Harvard University, Boston;

EUGENE F. TRAUB, M.D., of Columbia University, New York;

SHIELDS WARREN, M.D., of New England Deaconess Hospital, Boston.

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Premarital Health Examinations In Kansas*

On and after July 1, 1947, every person marrying in Kansas must obtain a medical examination, including a standard blood test for syphilis, from a physician. The examination and blood test must be made within 30 days before a marriage license is issued. The law which was finally passed by the legislature differs in a number of respects from the original bill introduced. More than 32 states have passed similar laws and in many others such legislation is now pending. While laws of this type have as their primary objective the finding of syphilis, physicians should not overlook the excellent opportunities in the field of preventive medicine.

In 1946 approximately 70,000 marriages were performed in Kansas, of which 55 per cent were marriages of out-of-state applicants. Under the premarital law and the law requiring a three-day waiting period, both of which were recently passed by the legislature, requirements for marriage applicants of Kansas will now be somewhat similar to those of surrounding states. This, undoubtedly, will result in our total marriages dropping to a more normal level of 35,000 annually. We could reasonably expect then a minimum of 70,000 persons, to a large extent young adults contemplating marriage, to contact their physicians for an examination each year.

This contact is of utmost importance to the applicant, the physician, and to the state of Kansas. To the applicant, it provides an opportunity for a complete health inventory, together with sound medical advice at one of the crucial periods of his life. To the physician, it brings to his office a young adult about to make one of the most important decisions of his life. The contemplated marital relationship will directly influence the health and lives of others. The physician has a grave responsibility and, on the other hand, one of the finest opportunities to focus the attention of this potential family member on the benefits to himself and family members secured through continuous use of modern medical services and facilities. The physician, through his understanding, diplomacy, and professional skill, at this particular time can instill confidence, trust, and respect which may result in medical services being extended at the most opportune times for complete protection of the individuals of this potential family. The state has everything to gain in a situation which gives promise of reduction of both morbidity and mortality in this young group of home builders in whose hands rests the future of the state.

The procedure for examination in Kansas under the premarital law is as follows:

1. The applicants for a marriage license consult a physician for an examination and blood test.

2. The physician sends a specimen of blood to an approved laboratory. This specimen must be designated as a premarital test.

3. The laboratory examines the specimen of blood, fills out the upper half of the certificate form; then it completes the laboratory report of serological test for syphilis in triplicate, giving the original copy to the physician, sends a duplicate to the Kansas State Board of Health at Topeka, and retains the third copy in its files.

4. After careful examination of the applicant and the laboratory report, the physician completes the certificate and gives it to the applicant.

5. The applicant signs the certificate at the bottom of the form and presents the completed certificate to the probate judge who issues a marriage license, after the three-day waiting period has elapsed.

The approved laboratories will be supplied with the certificate forms, entitled "Marriage Health Certificate." The physician will receive one certificate form from the laboratory for each applicant for whom he submits a specimen of blood designated as "premarital." The laboratory statement does not give the result of the test, which will be sent to the physician on a separate report, to be retained by him.

The decision as to whether or not the marriage license is issued rests with the probate judge. The physician is required only to examine and certify his opinion as to: (1) whether or not the applicant is infected with syphilis; (2) shows symptoms indicating infection with other venereal disease; (3) if so infected, whether or not the disease is in a communicable or potentially communicable stage, and (4) whether or not the applicant is feeble minded.

If the physician feels that the individual has an infection which is transmissible to his marital partner, he undoubtedly will not sign the certificate, but will make every effort to place the applicant under treatment. When the physician later feels that the patient is free of infection, a new application form can be completed.

The law forbids the issuance of a marriage license by a probate judge if the physician certifies that an applicant is infected with syphilis; therefore, the physician must exercise his judgment as to the interpretation of "infection with syphilis." Those persons who have had treatment for syphilis adequate to insure their non-infectivity, who have sero-resistant (Wassermann-fast) infections, or who may not have syphilis despite a positive blood serological test, may be declared to be "not infected with syphilis" in the opinion of the physician. The refusal of a license by the probate judge may be appealed to the judge of the district court, who may order its issuance.

It is expected that the usual fee for medical examination be paid by the applicant; however, the law provides that "any county or city health officer shall, upon request of any applicant, perform the examination and make the certificate required hereunder, without charge." The law further provides that laboratory tests may be made on request without charge at the laboratory of the State Board of Health at Topeka.

Procedure for examination outside of Kansas:

1. Certificate forms can be obtained from the Kansas State Board of Health, Topeka.

2. Certificate forms of similar content, nature, and character provided by other states having comparable laws shall be acceptable for non-residents of Kansas.

3. Serological tests for syphilis must be performed within 20 days prior to issuance of a marriage license.

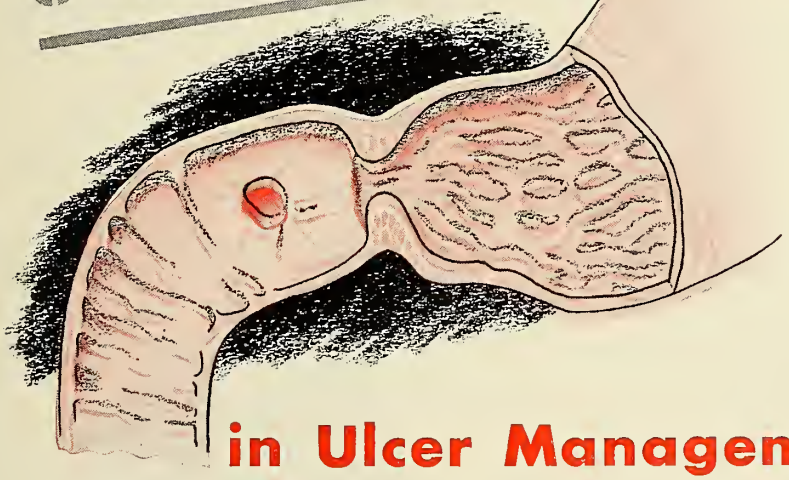
4. Any state laboratory, U. S. Public Health Service laboratory, U. S. Army or Navy laboratory, or any laboratory aproved by the State Board of Health of the state in which said laboratory is operated, shall be considered approved.

5. Forms issued by the Army and Navy will be accepted for military personnel.

The law provides a penalty for misrepresentation of the facts called for by the certificate form, or for failure to comply with the provisions of the act. Any person violating the provisions of the act shall be guilty of a

*This timely explanation of premarital health examinations is presented in the June issue of the Journal in the space ordinarily devoted to one of the state institutions. The series of articles on state institutions will be continued in July.

constipation



in Ulcer Management . . .

"Constipation is not an important **symptom** of ulcer, but is often the outstanding **complaint.** Many patients either disregard the 'indigestion,' distress or pain . . . Such patients frequently become established cathartic addicts, with resultant bowel dysfunction and abdominal discomfort to confuse the distress picture."

—Portis, S. A.: Diseases of the Digestive System, ed. 2, Philadelphia, Lea & Febiger, 1944, p. 199.

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misdemeanor, and, upon conviction, shall be fined not less than one hundred dollars nor more than five hundred dollars.

The law further provides a similar penalty for violation of the confidential nature of all certificates, laboratory statements, reports, files and records, other than the marriage license or the application therefor. These shall not be divulged or open to inspection of any person other than state or local health officers or their duly authorized representatives, except by written permission of the party or parties concerned.

The premarital law is distinct from the three-day waiting period law, which provides that three days must elapse between the filing of an application for and the issuance of the marriage license.

The laboratories which have been approved by the State Board of Health for performing serological tests for syphilis, up to the present, are as follows: (Other laboratories will be approved as they qualify for approval.)

1. Division of Public Health Laboratories
   Kansas State Board of Health, Topeka
2. Lattimore Laboratories, Topeka
3. Dupray Laboratories, Hutchinson
4. University of Kansas Hospitals, Kansas City
5. Sackett Laboratory, Kansas City
6. Wichita City Health Department, Wichita
7. Bethany Hospital, Kansas City
8. Wichita Clinical Laboratory, Wichita
9. St. Francis Hospital, Wichita

Medical Reserve Organization

Plans are being made for the organization of various medical units in Kansas as part of the overall organized reserve program, according to information received from Col. C. C. Higgins, Topeka, who is in charge of the program in this area. Officers in the grade of major and captain are particularly desirable at this time, and those not now in the O.R.C. are asked to apply for commissions.

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THE IRRITABLE BOWEL SYNDROME*

Philip W. Brown, M.D.**

Rochester, Minnesota

One is frequently confronted — and often confounded — with the comment: "Doctor, I do hope you can do something for my colitis. I have been to so many doctors and no one has been able to help me." These remarks usually are offered by a woman but may be made by a man and, parenthetically, one might add that he is often the more difficult to satisfy.

Two definite questions raised in such an introduction do afford an immediate basis for consideration. The first is, "What is meant by colitis?" and the second is, "What is the correct diagnosis?" The patient's search for a "cure" implies one of two extremes—either that he has an obscure disease or a functional disturbance. We physicians condemn use of lax, vague, diagnostic terms and decry indiscriminate prescription of diets without being willing to accept that the responsibility for such practices rests on our own shoulders. And always an undercurrent of anxiety is present in our minds that this "pat" comment may not be the plea of a patient who has a functional disorder and that some underlying or coexistent disease may give rise to it.

First, the term "irritable bowel syndrome" must be defined. In this discussion, concern is not primarily with the patient who complains of constipation but with those who suffer from diarrhea, either intermittent or chronic, abdominal soreness, gas pains, cramping and varying degrees of ill health and inefficiency. This condition occurs most unusually in patients less than 20 years of age; it is a phenomenon which appears as life becomes more complex.

Often we physicians are tempted to minimize repetition of various studies that have been carried out previously but we should be reluctant to assume responsibility for management of this or any other condition without as complete knowledge as is possible. We must first convince ourselves that the diagnosis is correct in order to have any success in convincing the patient.

After the history has been taken and physical examination completed, the orderly sequence of studies of the intestine is conducted. Examinations of the stool for parasites and ova are essential, although in the North Temperate Zone the only clinically important parasite is Endamoeba histolytica. It is difficult for some of us to be sure that Giardia lamblia is a pathogen, while other flagellates as Trichomonas hominis and Chilomastix mesnili, along with all amebae except Endamoeba histolytica, are definitely in the nonpathogenic category. Ascaris lumbricoides and hookworm ova may be encountered occasionally if the patient lives in an area where sanitation is poor. Symptoms due to tapeworms in the intestinal tract are nil.

Next is the study of the mucosa of the terminal part of the large intestine, as seen through the proctoscope. If this procedure, together with studies made after a barium enema has been given, reveals nothing, not only the various types of true colitis but the presence of any form of tumor will be excluded from the diagnosis. Likewise, we know that approximately 90 per cent of patients who have regional enteritis have evidence of disease in the terminal portion of the ileum. The roentgenologist's study of the colon and terminal portion of the ileum will settle doubt concerning the presence of regional enteritis. Knowledge that the blood count and sedimentation rate are normal is of some secondary value. In a few instances, roentgenologic examination must be made at frequent intervals after a barium meal but only in a relatively small number of cases is this prolonged study warranted.

*Read before the meeting of the Kansas Medical Society, Topeka, Kansas, May 13-15, 1947.

**Division of Medicine, Mayo Clinic.

Many patients have had an examination of the gastric acids, and low acid values are ascribed as part of the explanation of the bowel symptoms. Such may indeed be true and it is a simple matter to prove this in three or four days. The patient is told to sip a glass of water containing 30 to 40 drops of dilute hydrochloric acid with each meal. Unless a definite improvement is noted, there is no need for him to take the acid. It is a pertinent observation that of 100 patients who have achlorhydria, only about 10 per cent will complain of diarrhea. And of these 10, only one will be benefited by taking dilute hydrochloric acid.

A few instances of intestinal dysfunction associated with diseases such as hyperthyroidism, primary anemia, sprue and diabetes are encountered, but a correct diagnosis of these conditions is usually not long in being attained.

If after these diagnostic points have been considered, we have reasonably well satisfied ourselves that the patient's symptoms are not due to or associated with some organic disease, the real problem becomes evident: to explain convincingly the patient's condition to him. A fundamental start is to assure him positively that true colitis, cancer and such conditions are not present. Certain terms for the condition now known to be present have long been employed as a convenient "out." The more commonly used and most reprehensible terms are "mucous colitis," "spastic colitis" and "simple or chronic colitis." We must school ourselves never to use the word "colitis" unless there is actual inflammation of the colon. To do otherwise invariably gives the patient the impression that while it may not be a bad type of colitis, it is colitis.

To analyze and discuss the problem further, we must learn the background of the patient, as well as the precipitating factors that preceded the bowel symptoms. From the center of social and economic crises radiate the problems of fear of disease, environment, irregular habits and abuse of laxatives. Undoubtedly fear and lack of security are the fundamental problems. Heredity and congenital faults are additional factors.

To this group of contributing factors allergy, the one biggest stumbling block, must be added. The other factors may take time and persistent patience but the importance of allergy is the hardest for the doctor to evaluate. In some cases the answer is obvious, but in others, such as those in which wheat is the offender, the simpler methods are not helpful. If only satisfactory preparations of food fractions were available for use in skin tests, the problem would be simplified. Such experience as I have had has led me to consider skin tests for food allergy as all but worthless. The principle is correct and some clever chemist eventually will prepare correct fractions for such tests, but until that time, food allergy is a problem. Of course a fairly accurate method of answering the question of which food is the cause of bowel trouble is to have the patient go without food for 48 hours, taking nothing at all but water, and then to eat the suspected food. This form of diagnosis may be a bit Spartan but will settle any question of food intolerance in all but very rare cases. I make it a practice to instruct patients whose complaints are suggestive of the irritable bowel syndrome to watch for possible food intolerance. If they suspect any substance, I suggest that they eat or drink a fairly generous amount at a time when the stomach is empty and see if there is trouble. The principle is similar to that of a food diary.

Another plan, the elimination diet, is of course indicated in a few instances, but it is such a laborious, prolonged regimen that one is rarely justified in employing it.

Somewhat related to the problem of food intolerance is that of abdominal migraine—that curious explosion from either end of the gastro-intestinal tract—which may strike day or night. At times it has seemed that allergy may be a factor but in more instances it is merely the explosion of nervous tension, and when it occurs without associated headache, the correct diagnosis may not be too easy. It is patients who have this condition who are sometimes too quickly subjected to removal of a "poorly functioning gallbladder;" are told, "the appendix doesn't show on x-ray" or "the womb is tipped and there is a cyst of the ovary."

Aside from allergy and migraine, the purely emotional factors as they influence bowel dysfunction are always difficult to explain to the patient. We are chided for our brisk and cheerful, "Well, now, there is nothing wrong with you." While this is true of these patients in a sense, perhaps it could be better stated, "Our studies are of great satisfaction and comfort in that no disease process has been found." Then we should proceed to explain that such is 50 per cent of what must be known to solve the problem and the remaining 50 per cent must be worked out in terms of the patient in relation to himself and his environment. This is obviously an individual approach and no rule can be established. It is my opinion that the great majority of these patients are not candidates for psychoanalysis—most of them can be reached by a reasonable expenditure of the physician's time and patience. The group in which the correct diagnosis is psychoneurosis with obsession or fixation features is in the domain of the psychiatrist, and by the same token it is futile for most of us to struggle to change the opinion of the patient who "knows" that the bowel is diseased.

A very interesting and considerable group of pa-

tients are those whose symptoms followed a definite disease such as amebic colitis, bacillary dysentery and so-called intestinal flu. Such patients may have persisting spells of diarrhea and more or less abdominal unrest. In the past I have treated such patients who have had amebic or bacillary dysentery with repeated courses of arsenicals, oxyquinolines and sulfa drugs because of the uncertainty and doubt that the offending organism might still exist. Gradually I began to appreciate that these patients had an irritable bowel as an aftermath of an infection. Reassurance of the patient that such is the case, that it has been encountered in others, and that the less one "doctors" for it, the quicker it will subside has done much to relieve them. As yet we have no sound explanation of why symptoms should persist but they do. Many veterans are presenting themselves with complaints suggestive of this type of the irritable bowel syndrome. By all means, careful studies of the stools and bowel must precede diagnosis, but certainly one must not label the condition "chronic dysentery" or "colitis" unless their presence is actually proved.

Eventually the physician has to answer the questions of "Well, doctor, what about my diet and what medicines should I take?" Diet and vitamins! "We are hoist *with* our own petard." A patient without one or more diet lists or who does not take supplementary vitamins is almost unique.

First, as to what shall be eaten: to me it seems most important to stress the fundamental fact that what one puts in the stomach is a highly individual problem. All of us will deliberate and fuss about the fit and appearance of our clothes and yet a ready-made diet list is accepted promptly as holy and final. The patient must understand that it is most unlikely that a fixed list of foods which can be suggested will be suitable. He must have adequate food, curtail, more or less, the intake of fruits and vegetables, and make personal observations concerning true intolerance. If time and circumstances permit and the patient wishes to do so, it is possible to work out with him what is to be eaten and drunk and recommendations are based entirely on his reports. The quicker he is "put on his own" and ceases to feel that he must be tied to his doctor's apron strings, the more promptly will the solution be attained. Occasionally a patient is encountered who drinks a needless amount of water and curtailing that may help to decrease intestinal onrushes. We have so built up the fetish of diet, especially in conditions in which specific therapy is of no value, that the patient considers the diet of far more importance than we really intend. Let us use the word "food" in a broad sense and avoid the word "diet," at least in this problem.

The figures of the sale of vitamins have become astronomical, due again to our wishful thinking in so many instances, and sales have been accelerated amazingly by the cheerful, convincing patter of the detail men, to say nothing of "blurbs" via the radio. None of us should need to be reminded that only a small fraction of our patients require supplementary vitamins. As vital as they are in some instances, almost on a par with insulin and liver extract, so few patients really need them. If the patient cannot tolerate citrus fruits, it is erring on the safe side to recommend that he take 100 mg. of ascorbic acid daily. Likewise, if all meats are poorly tolerated—a rare condition—then taking a supplement of B complex is wise. If for any reason the patient cannot drink milk, he should take a heaping teaspoonful of tribasic calcium phosphate each day. It should be dissolved in half a glass of hot water and this should be drunk after sufficiently cool; it must be taken when the stomach is empty to promote the maximal absorption of calcium.

After we have established the diagnosis of irritable bowel, it is a corollary that no medication can be of any direct value. It is often practical to suggest that the patient take small doses of some sedative, the cheapest and most effective, as a rule, being one-half grain (0.032 gm.) tablets of phenobarbital. The drug is to be taken before meals and possibly at bedtime, but again, advise the patient to use it when he feels under stress. He must appreciate that it is given to decrease emotional stress and drive and is not a medicine for the bowel itself. There is no objection to the patient's taking any of the inert substances such as bismuth, kaolin, pectin preparations and the various combinations of these produced by the ingenious manufacturers. However, again, be sure that the patient uses them solely on the basis of hoping to decrease fluidity and frequency of the bowel movements. Furthermore, advise him to take them or leave them, depending solely on their value in his case. In the main, such preparations are merely that much more material to be excreted.

My experience has thus far been disappointing in the use of antispasmodics. From belladonna on to various recent products, little seems to be gained by their use. Many products are combined with phenobarbital and I think that administration of phenobarbital alone accomplishes just as much.

It should not be necessary to conclude with the remark that colonic irrigations are not even to be considered. This form of treatment seems to be declining, as well it should.

SUMMARY AND CONCLUSIONS

The irritable bowel syndrome is a condition that

frequently is encountered in patients more than 20 years old. It is characterized by diarrhea—either steady or intermittent—abdominal discomfort and pains, increasing concern over food and medication, and more or less general poor health. In some instances, it is an aftermath of acute infections, such as bacillary amebic dysentery and so-called intestinal flu. A careful investigation is essential to convince first, the physician and for him, in turn, to convince the patient, that no disease process is the cause or co-exists as a contributing factor. The term "colitis" should never be used unless actual inflammation of the colon exists. The term "proper or suitable food" should be used instead of "diet." Other than judicious use of mild sedatives, no medication is of any particular value.

THE DIAGNOSIS AND MANAGEMENT OF EARLY SIMPLE GLAUCOMA*

Samuel J. Meyer, M.D.

Chicago, Illinois

In compensated glaucoma, the intraocular tension is, as a rule, higher than in the normal eye. While the circulatory regulating mechanism of the intraocular fluids is normal in the latter, in compensated glaucoma there is a disturbance of the tension regulating factors. The glaucomatous eye reacts more readily to the influence of circulatory disturbances than the normal eye. A definite equilibrium of the intraocular fluid circulation is maintained, so that acute rises in tension do not occur. Due to the absence of venous congestion, glaucoma simplex was designated as *compensated glaucoma* (Elschnig), *compensated circulatory disturbance glaucoma* (Wessely) or *glaucoma lymphostaticum* (Heerfordt).

The subjective complaints in the beginning of the disease are of a very mild character or may be entirely absent. Pain, cloudy vision and halos do not occur. The constant increased tension usually results in an excavation and atrophy of the optic disc. The later decrease in visual acuity causes the patient to present himself to the ophthalmologist for examination. If the visual decrease is very gradual, the patient may believe it due to the usual senile changes in old age, and may further delay examination.

Externally, the compensated glaucoma eye differs very little from normal, because the changes in the anterior segment are negligible and can only be recognized with careful methods of technic. It is of the utmost importance to be fully conversant with the ophthalmoscopic picture of the optic disc, the functional changes, etc., which accompany the intraocular tension changes.

SYMPTOMS—INTRAOCULAR TENSION IN COMPENSATED GLAUCOMA

The height of the intraocular tension in compensated glaucoma varies in each individual. The pressure is usually between 30 to 50 mm. Hg. However, there may be variations above and below these figures. There are cases recorded in the literature in which the tension has never been above the so-called physiological normal, and yet typical pathological excavation of the optic disc is present. This form of glaucoma has been designated as "glaucoma without tension" by Elschnig and Magitot. However, some of these cases have developed a high tension later, and, in others, the excavation of the disc has been accounted for by an arteriosclerosis of the internal carotid arteries or circulus arteriosus Willisu, resulting in a descending atrophy of the optic nerve.

The change from normal to pathological tension in compensated glaucoma occurs very slowly and gradually. Sudden increases in tension as in acute glaucoma do not occur. The tension increases gradually over a period of years and then remains more or less stationary. A tension curve over a long period of time will reveal a definite yearly and daily variation. Familiarity with the daily and yearly tension curve is of the utmost importance in ascertaining the prognosis and therapy of compensated glaucoma.

One should become thoroughly familiar in the technic of taking intraocular tension. A local anesthetic which does not dilate the pupil, i.e., Butyn two per cent solution, Pontocaine HCl one-half per cent solution, is instilled twice at two minute intervals. The patient should be prone on a table, couch or reclining chair. The examiner retracts the lids with the fingers of one hand and places the tonometer vertically on the cornea with the other hand. No pressure is made upon the eyeball, the tonometer resting of its own weight on the cornea. The pointer reading on the graduated tonometer scale is made with at least two different weights. This reading is interpolated according to the graph accompanying the tonometer, into mm. Hg.

*Read before the meeting of the Kansas Medical Society, Topeka, Kansas, May 13-15, 1947.

THE DAILY TENSION CURVE IN COMPENSATED GLAUCOMA

If the intraocular tension is measured at regular intervals (five times) through a 24-hour period, there are no great variations found in the normal eye. In a glaucomatous eye the diurnal tension will vary considerably. There may be a variation of 20 mm. Hg or more. Then tension is highest in the morning between 5:00 and 7:00. After the individual arises, the tension decreases sharply at first, and is then followed by a gradual decline throughout the day. There is a slow rise at night until about 3:00 a.m., then the rise becomes accentuated towards morning. The variation may be due in some measure to the redistribution of blood while in the prone position, and changes in its osmotic value resulting from exercise and feeding, and to changes between light and darkness. Essentially, however, it appears due to the lack of muscular activity at night and its increase on arising. This acts by massage of the globe by the extra-ocular muscles and by the opening up of the canal of Schlemm by the ciliary muscle. It is probably a measure of the efficiency of the drainage channels.

If both eyes are affected by a compensated glaucoma, the pressure curves reveal similar variations. If one eye only is affected, the pressure curve of the second eye may show no variation, or only slight elevation during the night. In the diagnosis of this type of glaucoma, the extent of the variation rather than the absolute tension may be of importance, for in an early case, a glaucomatous curve may lie wholly below the normal level. The tension should be measured at least twice daily, once in the early morning.

A variation of the ocular tension in the dark is also of significance in compensated glaucoma. Gronholm (1910) first demonstrated that the tension of the normal eye tends to rise somewhat after a stay in the dark and that a glaucomatous eye shows a considerably higher rise. Seidel proved these observations clinically in 1920. Gronholm considered the reaction due to pupillary dilatation resulting in an abolition of the drainage capacity of the iris. Seidel thought that the dilatation allowed the angle of the anterior chamber to be blocked by the iris; but since he showed that the variation had no relation to the size of the pupil, was unaltered in aniridia and after an iridectomy, and occurred although modified in degree after atropine and pilocarpine, Feigenbaum (1931) concluded that it was due to the direct action of light upon the ocular capillaries rendered more labile in the glaucomatous state. He showed, moreover, that the reaction occurred bilaterally in unilateral glaucoma, even though the affected eye was blind, so long as it was not degenerated, and that this bilaterality was abolished after an optico-ciliary neurectomy, from which he inferred that it was mediated by a vasomotor axon reflex. In the normal eye, the change occurs after dark adaptation has lasted 40 minutes, the rise is small (about two mm. Hg Schiötz), and the tension falls rapidly on re-exposure to light. A rise of over six mm. Hg Schiötz is suspicious of primary glaucoma, and variations of 30 mm. Hg or more may occur.

PROVOCATIVE TESTS

The dark room test previously mentioned is probably the most reliable and most frequently used of the several provocative tests to be mentioned. These tests depend on pupillary dilatation, venous congestion, changes in accommodation, and on osmotic and vasomotor factors.

The mydriatic test consists of the instillation of 1-2 drops of two per cent cocaine solution, or two per cent euhthalmine solution, or two per cent homatropine solution. The tension is taken before the first drop and 90 to 120 minutes later. An increase of seven mm. or more (Schiötz) is considered pathological.

The accommodation test consists of reading fine print at close range for a period of 45 minutes. An elevation of 10-15 mm. Hg Schiötz has been noted by some observers. The author has never found this test positive.

The massage test. In the normal eye, the tension is lowered to one-third or one-half of its normal value by deep massage of the globe for one minute, or the resting of a 250 gram weight upon the closed lid for 10 minutes. In 60-70 minutes the tension should then return to normal. In glaucomatous eyes the tension falls less and returns to its normal level more rapidly (30 minutes) and rises above this level, falling to normal again in one and one-half hours.

The anterior chamber puncture test of Kronfeld. After puncture of the chamber the tension of the normal eye does not rise beyond 25-35 mm. Hg Schiötz, but in glaucomatous eyes it may be 40-60 mm. or more.

Tests depending upon the induction of venous congestion. If the patient lies down with the head low for one hour, a rise of six mm. Schiötz may be indicative of a glaucoma. One may constrict the neck with a bandage tight enough to cause venous congestion but not enough to interfere with speaking or swallowing. After an hour, an increase of over six mm. Schiötz might be considered pathological.

Tests depending on osmotic or vasomotor factors. The caffein test is carried out by giving an intravenous injection of 0.2 gm. of caffein or having the patient drink one or two cups of strong black coffee. In the glaucomatous eye, there is a rise of

15-25 mm. Schiötz in 20-40 minutes.

In the drinking test, the patient drinks one quart of water to which may be added a small amount of fruit juice before breakfast, as rapidly as possible. The tension is taken every 15 minutes and should rise 6 to 15 mm. Schiötz in one-half hour.

In the fluorescein test, the patient is given sodium fluorescein orally. In iritis and glaucoma, a fluorescent beam is visible with the slit-lamp.

The adrenalin test consists of instillations at one minute intervals, for five minutes, of one drop of 1:1000 adrenalin chloride solution. In glaucoma patients, the pupil is supposed to dilate and is indicative of a sympathetic excitability.

Usually there are no visible changes present in early simple glaucoma. The anterior chamber is usually normal in the beginning. A fairly shallow chamber has doubtful diagnostic value, as the shallowness varies with the refraction and is greater in hyperopic and presbyopic eyes than in normal eyes. In the so-called juvenile glaucoma present in people under 35, the anterior chamber is deeper than normal.

The size and reaction of the pupil are generally normal in the beginning. Pupillary changes, atrophy of the iris and increased congestion of the vessels of the iris make their appearance later in the disease.

Slit-lamp examination may reveal the presence of excessive deposition of fine pigment dust over the iris, the posterior corneal surface and the anterior lens capsule. This factor may be of significance in indicating a possible latent glaucoma. However, it is difficult to differentiate these changes from those found in senile eyes. They may appear later in the disease, especially after operative interference.

Gonioscopic examination may reveal the presence of pigment dust in the chamber angle. It is possible that this may cause an obstruction of Schlemm's canal. However, this pigment may be present in normal eyes in some degree. It is quite possible that the amount of pigment present may have a direct bearing on this subject. Some authors have observed on biomicroscopic examination an area of blockage in the trabecula which separates Schlemm's canal from the anterior chamber, and believe that this may be a causative factor.

Opacities of the lens may be present, but occur so frequently during the age period when glaucoma is most prevalent that their presence is of no diagnostic value. Vogt pointed out that in cases of lenticular opacity in which the opacity is primarily an exfoliation of the anterior capsule, glaucoma may develop. Slit lamp examination will reveal bluish gray clumpings at the pupillary border of the iris. These are the result of exfoliation of the anterior capsule of the lens, and possibly these clumpings may also interfere with the drainage of Schlemm's canal, and may in this way cause glaucoma. The condition is called glaucoma capsulare. In these cases, there is usually a low grade glaucoma which should be carefully watched.

The typical picture of glaucomatous excavation and atrophy does not belong to the classification of early simple glaucoma but is seen only in the later stages. The diagnosis of an early glaucomatous cup is difficult. If there has previously been a definite physiologic cup in the center of the disc, it may enlarge during the early stages on increased pressure. Consequently, in beginning glaucoma there may be only a large physiologic cup present in the disc. In every case of an unusually large physiologic cup, beginning glaucoma must be thought of. This condition should not be confused with a true glaucomatous cup, as the normal color is present, not the greenish tinge of the glaucomatous cup. The glaucomatous halo is absent, and there usually remains a narrow band of normal nerve tissue. In cases in which no physiologic cup is present, the earliest sign of excavation is a very flat shallow cupping beginning sharply from both the nasal and the temporal sides. The vessels in this instance show only a very slight dip at the margin of the disc.

The time required to produce a glaucomatous cup varies in each individual case, and depends on the degree of tension and the structure of the eye. There are cases in which the disc withstands rather high tension for a long time without signs of cupping, and conversely, there are eyes in which the tension is relatively low and in which a glaucomatous cup develops early.

THE DISTURBANCE OF FUNCTION IN COMPENSATED GLAUCOMA

The visual fields. In compensated glaucoma, the disturbance of function depends upon the excavation of the disc and the atrophy of the optic fibers. This results in a degeneration of various nerve fiber bundles with characteristic visual field defects. Perimetry then becomes a most valuable method of investigation, not only to establish the presence of the disease but also to measure and estimate its progress, and assess the value of treatment.

In the early stages, the peripheral visual fields may be normal. However, small scotomata usually arise from the blind spot, which usually follow the course of the nerve-bundle fibers above or below the center, or both above and below (Bjerrum). These may coalesce on the nasal side and form a ring scotoma. These defects may also extend to the peripheral field. Such central field defects are best observed by means of a black tangent screen at one to two meters distance, using one mm. white targets. The nasal step (Rönne) may develop early, and if present both above and below may result in

an entire loss of the nasal half of the field. The absence of a preferential loss of the color field in areas which are partially affected, indicates that the functional loss is due not to the partial impairment of all the fibers, but to the complete impairment of a small proportion of the fibers in a particular bundle. These defects are probably largely brought about by the anatomical conditions at the disc, the two massive bundles which enter the disc on the outer side of its upper and lower poles being first affected at the points where the fibers are most numerous. Thereafter, successive fibers to the nasal side are involved, and the macular fibers last. The phenomena cannot, however, be explained as pressure-atrophy of the nerve fibers alone, but suggest that the vascular factor is also of importance. Its influence in determining these scotomata is seen in their independence of the tension of the eye and their occasional progress after its relief, while their dependence on the fluid-traffic of the eye is seen in the varying changes which occur when the tension is similarly altered by agents, which have different vasomotor effects, such as adrenalin, pilocarpine and hypotonic saline.

The visual fields should be compared at least every three months to note if any further involvement is occurring. The repeated examinations should be made under the same constant conditions, viz.: degree of illumination, size of pupil, time of day and relations to stimulants, the state of fatigue or anxiety, etc.

The *light sense* suffers severely in compensated glaucoma, and patients may have difficulty in adapting themselves on entering a dim illumination after a bright light.

COURSE OF THE DISEASE

Chronic simple glaucoma begins without symptoms such as pain or visual disturbance, so that frequently the disease is well advanced when the ophthalmologist is consulted. If the disease is untreated, the well known picture of glaucomatous cupping, atrophy and blindness results. There is also a tendency for glaucoma simplex to develop into the chronic inflammatory type of glaucoma. In unilateral glaucoma the apparently healthy eye must be watched carefully, as in the majority of cases both eyes are involved sooner or later.

The diagnosis of an early compensated glaucoma may be a difficult problem. Early symptoms should include rapidly increasing presbyopia, headaches, obscurations of vision, and the occasional presence of halos. Early clinical findings consist of minute enlargements of the blind spot, lowering of the light sense and the appearance of fine Koppe pigment granules on the iris and posterior corneal surface. Cupping of the disc usually occurs in more advanced cases. In the diagnosis of an early compensated glaucoma, the finding of a normal—or even subnormal—tension on one or more occasions is no criterion that glaucoma does not exist. A diurnal curve over a period of three days, taken at four-hour intervals, is of importance. Even though the tension never rises above the "normal" limits, a variation of 10 mm. Hg Schiötz may indicate a latent glaucoma. If this test is negative, then the various *provocative tests* mentioned previously should be made in an attempt to elicit an abnormal rise of tension. The object of the diurnal and provocative tests is to elicit any instability in the ocular tension, for a normal eye has the capacity to maintain its pressure in equilibrium despite considerable provocation, an adaptability which the glaucomatous eye has lost.

MANAGEMENT OF SIMPLE GLAUCOMA

Medical Management. The patient should be impressed with the seriousness of the disease and the necessity of constant medication and regular observation. In the periodic examination, visual field studies, tension measurements and fundus examination are important. Probably the most important is a careful study of the visual field defect. The changes in the visual fields are the most important indication as to the progress of the disease, as some eyes can tolerate a tension higher than normal without deterioration, while in others an apparently normal tension is sufficient to produce changes.

Miotics—Pilocarpine and Eserine: These two drugs still continue to be the most valued in our armentarium in spite of several new drugs recently advocated. Their action is to stimulate the parasympathetic end-organs of the oculomotor nerve, producing a contraction of the pupil. The most commonly accepted theory of their action is that the base of the iris is freed and the angle of the anterior chamber thereby opened, thus opening Schlemm's canal, and increasing the absorbing surface of the iris.

Pilocarpine nitrate or hydrochloride is used in a 0.5 to two per cent solution, depending on the action desired. In some patients, a 0.5 per cent solution will keep the pupil contracted for eight to twelve hours. However, it is usually necessary to use a one or two per cent solution of pilocarpine every four to six hours to control the tension during the day. In order to ascertain whether the drops maintain a normal tension, it is advisable to take the tension at the end of a four- to six-hour period after they have been instilled. It is also advisable to use a drop at night before retiring, as the tension is known to rise during the night. It is sometimes necessary to use an ointment containing one to two per cent pilocarpine at night just before retiring to adequately control the night tension. Oc-

casionally in cases where the tension is usually normal during the day and rises at night, it may be necessary to instill a one or two per cent solution of pilocarpine at night only just before retiring.

Eserine salicylate or eserine sulphate may be used in a 0.2 to 1.0 per cent solution. The action of eserine is stronger than that of pilocarpine, but it has the disadvantage of being slightly irritating and if used long enough may cause a dermatitis venenata. It is believed that long-continued eserine therapy causes a deterioration of the eye, so that any case in which the use of eserine is required for the maintenance of normal tension must be considered a surgical one.

Pilocarpine when used over a long period may cause a dermatitis with an accompanying so-called pilocarpine conjunctivitis. When the patient becomes sensitive to both pilocarpine and eserine, their use must be discontinued and one must resort to one of the newer drugs.

Of the newer drugs, carcholin is probably best known. It was formerly known as doryl, and is used in a three-fourths or one and one-half per cent solution, one to four or five times daily. Its action is very similar to that of pilocarpine, but its cost is considerably higher.

Recently, DFP or di-isopropyl fluorophosphate has been reported in the literature as being very efficacious. It is used in 0.05 and 0.10 per cent solutions, and usually has a very prolonged effect, only one to two instillations a day being necessary. The author has seen some untoward complications in the use of same, especially pain and excessive spasm of accommodation, and until its side effects are better understood, caution should be used in its use.

In cases in which miotics do not control the tension, surgical intervention is indicated, as a rule. In such cases the sooner surgical intervention is advised, the better. Certain circumstances, however, may make a delay advisable or operation impossible, and under these circumstances some of the more recently advocated therapeutic measures may be indicated. Some of these conditions are: refusal of operation, a very old and feeble patient, and a one-eyed person who refuses operation.

Epinephrine hydrochloride has been advocated as a subconjunctival injection. However, Gradle's method of applying four to five minims (0.24 to 0.3 cc.) of a 1:1000 solution of epinephrine hydrochloride dropped on a small cotton pledget and placed in the lower cul-de-sac of the anesthetized conjunctiva for a period of two to three minutes is probably a safer and much simpler method of administration. Due to the fact that there is an accompanying dilatation of the pupil, it should be followed by the instillation of a miotic. Following the periodic use of such epinephrine soaked pledgets, the use of miotics may be enhanced, and the pressure may be kept normalized for some weeks or months after the use of miotics themselves have become insufficient. However, this method of therapy is not without its danger, and cautious use of same is advised. There is always the danger of the possibility of an acute glaucoma resulting.

Ergotamine tartrate (gynergen), one-half ampoule injected intramuscularly twice daily, or one-sixtieth grain (0.001 gm.) by mouth two to three times a day may be used. This method of therapy has not become very popular due to its side effects and the uncertainty of its action. It is rarely used at present.

The effect of any of the aforementioned therapeutic agents, aside from miotics, is a temporary one, and their value in simple glaucoma is chiefly in cases in which operation must be delayed.

Surgical management. Surgical intervention is indicated when miotics fail to control the tension, or when there is a decrease in the visual function as ascertained by an increase of the scotomas or a shrinking of the peripheral visual fields. Some excellent authorities believe in early surgery when the tension cannot be held with miotics to well within the normal limits.

Cyclodialysis in the author's opinion is the operation of choice when the tension under miotics is not above 40 mm. Hg (Schiötz). It should not be used in eyes with a considerably higher tension, except possibly where they have been operated upon previously by filtering operations which have been unsuccessful, and further filtering operations are deemed inadvisable. A properly performed cyclodialysis opens up a space between the choroid and sclera for the drainage and absorption of aqueous. The severance of the ciliary nerves and vessels over the area of operation may also result in a decreased formation of aqueous. If well performed in properly selected cases, a high percentage of successful results will be obtained. Occasionally hemorrhage occurring at the time of the dialysis with the spatula may result in a clogging of the newly formed space between the ciliary body and sclera, but pressure over the operative area at the time, may prevent or decrease the amount of bleeding. Usually the small hemorrhage resulting clears up rapidly. The operation may be repeated two or three times in different quadrants, if unsuccessful at first, and may be followed by filtering operations later if found necessary, as the eye is traumatized very little by the surgery involved. There is usually no loss of vitreous or trauma to the lens, as occasionally occurs in other types of surgery. When the operation is successful the intraocular pressure is reduced to normal; mio-

tics, however, may have to be continued to assure continued control of the tension.

Filtering operations are indicated where cyclodialysis has been unsuccessful, or in cases where the tension under miotics is moderately high. The type of operation depends upon the choice of the surgeon and his familiarity with the various technics. For many years the author has been partial to Elliot's trephining operation, but in the past five years has developed a preference to iridencleisis, due to the fact that it is probably easier to perform properly and gives successful results in almost 75-80 per cent of the cases.

PROGNOSIS

As in other types of glaucoma, the outlook must be guarded, as deterioration in visual function may continue to occur in spite of successful surgery with normalization of tension, etc. The lens may continue to reveal progressive cataractous changes or the visual fields may continue to deteriorate. However, as a rule, the prognosis is rather good, and in many patients vision can be preserved throughout life with miotics, surgery, or both. Continued periodic observation is absolutely necessary.

THE MANAGEMENT OF TINEA CAPITIS*

William H. Fritzemeier, M.D.

Wichita, Kansas

The recent increase in the incidence of tinea capitis in epidemic proportions in our larger eastern centers, as well as the apparent increase in Kansas, leads us to believe that more attention should be focused on this disease by the medical profession at large, as well as our public health authorities. Standardization of diagnostic and treatment methods, reporting of all cases and uniform instructions to parents as to contagiousness will reduce the incidence of this disease.

Tinea capitis is a disease principally of school children between the ages of 5 and 12, and is found only occasionally in infants and adults. It is spread by contact with infected hairs; either humans or pets can transmit it. The principal places of contact with infected hairs are the home, the school, the playground, the movies and barber shops. Spontaneous cures are seen at the age of puberty due apparently to the influence of internal secretions, which manifest themselves by the presence of an increase of fatty acids in the skin and hair, thus rendering the soil less favorable for fungous growth.

The diagnosis is made by the clinical appearance, Wood's filter examination, by microscopic examination of the diseased hairs and by culture on Sabouraud's media. Any two of these procedures being positive is conclusive evidence of the disease.

CLINICAL APPEARANCE

The initial signs are circumscribed patches on the scalp covered with a fine grayish branny scale. The hairs have not fallen out as in alopecia areata, but become lusterless, dry and fragile and break off just above the skin surface, leaving stubbled hairs about three mm. long. Inflammatory reaction is usually not present, but when it occurs presents a boggy fungating mass called kerion. Sometimes, true subcutaneous abscesses with sinuses develop. Any child with a patchy loss of hair requires an examination under the Wood's filter.

DIAGNOSTIC PROCEDURES

Wood's Filter Examination. This diagnostic procedure consists in the utilization of ultraviolet wave-lengths of about 3650A°, which are obtained by passing the beam through a Wood's filter composed of glass containing nickel oxide. This light has its greatest practical application in the diagnosis and management of tinea capitis. It not only helps establish the diagnosis, but is invaluable to follow the results of treatment and determine when all foci have been irradiated successfully.

The procedure is performed in a dark room placing the child directly under the light. When the operator's eyes become adjusted to the light, the diseased hairs show brilliant beads of greenish fluorescence and the scaly areas appear turquoise blue. By this method it is possible to determine accurately the exact range and location of a microsporon infection. Usually many areas not suspected by the naked eye will be located by the use of the Wood's filter.

It must be remembered that only the microsporon shows these fluorescent qualities, and while this group constitutes the causative fungus in about 90 per cent of all cases, the trichophyton or achorion may be the offending fungus, and under the Wood's filter shows little or no fluorescence. In these cases microscopic examination of the hairs and cultures on Sabouraud's media are necessary for a positive diagnosis.

Microscopic Examination. A few hairs that show fluorescence under the Wood's filter are removed with a pointed thumb forceps, or in non-fluorescent

*From the Dermatological Service of J. V. Van Cleve, M.D. and J. P. Berger, M.D. Wichita, Kansas.

cases, hairs from clinically suggestive areas are removed. The hairs are placed on a glass slide, a few drops of 30 per cent potassium hydroxide are applied and covered with a cover glass. The slide is warmed gently or allowed to set for a few minutes while keratin digestion takes place. It is then examined under the high dry objective. The spores on a Wood's positive hair are as a rule not difficult to identify.

Culture on Sabouraud's Media. Positive identification of the types of fungus in a given case is only possible by culture. A few fluorescent hairs are removed with forceps and planted on Sabouraud's media. In cases where there is no fluorescence a larger number of hairs is manually removed from the suspicious area and planted on the media. Room temperature is sufficient for growth of fungi and also tends to inhibit bacterial growth. No fungus growth is expected on the media until the 10th to 14th day, at which time the identification of the species can be satisfactorily established. A growth of microsporon lanosum may be expected a few days earlier.

OBSERVATIONS

We had occasion to observe 52 consecutive cases of tinea capitis over a period of 18 months. Of these 52 cases, 41 were diagnosed and treatment completed. Nine were seen for diagnosis. Two cases were diagnosed, treatment initiated and later discontinued.

Our routine procedure was as follows:

1. History as to duration, source of infection and family contacts.

2. Clinical examination for presence of short broken-off hairs with various degrees of inflammation.

3. An examination under the Wood's filter was made only if the scalp was free from previous medication. Various ointments produce a bluish fluorescence not greatly unlike diseased hairs. If ointment was present, the patient was instructed to have the hair shampooed daily for two days with no further medication and then return to be examined under the Wood's filter.

4. A microscopic examination was made of hairs and digested in a solution of 30 per cent potassium hydroxide. Greenish fluorescent hairs were taken when present. In the rare cases showing no fluorescence, hair was taken from clinically suggestive areas. This was necessary to detect infections due to trichophyton ectothrix, which shows no fluorescence, and achorion schoenleini, which gives only a pale green fluorescence. Microsporon lanosum and microsporon audouini always show typical greenish fluorescence.

5. Cultural studies were made by planting fluorescent hairs on Sabouraud's agar. If no fluorescent hairs were present, hairs were taken from clinically suggestive areas. The causative fungus was thus identified.

6. In each case contacts under the age of 13 years were checked in the same manner as the patient.

The efficiency of diagnostic procedures is apparent from Table I.

TABLE I

Diagnostic Procedures

Diagnostic Procedures	No. Patients	Percentage of Positive Findings
Microscopic examination	52	100
Wood's filter	48	92.3*
Culture on Sabouraud's media	46	89.6

*It must be remembered that cases of trichophyton infections are always Wood's negative. There were four such cases in this series.

The different types of fungi identified are listed in Table II.

TABLE II

Types of Fungi Identified by Culture

Types	No. Cases	Percentage
Microsporon lanosum ..	42	91.2*
Trichophyton gypsum ..	3	6.4
Trichophyton purpureum	1	2.2

*The findings of over 90 per cent microsporon lanosum on culture in this series is quite interesting from a statistical standpoint because the cultural findings in the large eastern centers are predominately microsporon audouini. In this series no case of microsporon audouini was found. Although this series is small, it tends to show that the animal source of infection (microsporon lanosum) seems in this area to be a major public health problem in the control of tinea capitis.

THERAPY

Total epilation of the scalp by the use of x-ray therapy still remains the treatment of choice and was used on a large percentage in this series of cases. The four-point technique using one skin unit on each designated point is the method used. This is a procedure that should only be attempted by one well qualified in radio-therapy. The involvement of the hair roots by the fungus makes local applications of tineacides alone only mildly beneficial.

When only one small area is involved as proven by Wood's filter examination, and the parents are very cooperative, it is sometimes advisable to epilate only the local involved area, including a safe margin around it. This can be accomplished by local irradiation or manual epilation under the Wood's filter. Patients nearing puberty may be given estrogen therapy in an effort to produce spontaneous cure by increasing the fatty acids in the scalp. The application of tineacides is usually withheld until the epilating dose of x-ray has been given.

The hair becomes loose following x-ray treatment in from 16 to 19 days, at which time it is removed by the application of Pusey's epilating wax, which is heated, cooled and applied to cloth which in turn is applied in sufficient quantity to cover the scalp. After setting from two to three minutes the cap is removed en masse, thus removing all the hair including the roots. An adhesive plastic cap may be used in the same way as the wax in order to accomplish epilation but is a much slower procedure and has been much less effective in our hands.

The parents in each case were instructed as follows:

1. The patient is not to play with other children, especially those under 14 years of age, not to attend school, theatre, Sunday School or go to the barber shop.

2. A stocking cap, or skull cap, is to be worn at all times. Several are to be available and each cap is to be boiled after being worn one day before being reapplied. In cold weather an ordinary cap can be worn over the stocking cap.

3. If the hair is quite long, it should be clipped at home, not at the barber shop, and the hair placed in a paper sack and burned. This is to facilitate ease of therapy before total removal of hair.

4. A shampoo is to be performed daily with one per cent mercuric iodized soap and followed by the twice daily massaging with a fatty acid ointment containing ammoniated mercury.

5. After the hair is removed, daily manual removal of hair from the original sites is to be performed at home with a weekly visit to the office for examination under the Wood's filter, at which time all the fluorescent hairs will be removed with a pointed thumb forceps. For patients who live at a great distance, a Wood's filter was supplied for daily examination and removal of any fluorescent hairs at home.

6. Burn all caps after the patient is considered cured.

The patients who were Wood's positive were considered cured when their scalp became Wood's negative on two consecutive weekly examinations. Where there was any doubt, hairs were removed for microscopic examination or culture. In cases of trichophyton infection, the Wood's filter is always negative; therefore, microscopic examination of hairs from clinically suspicious areas was repeatedly done and the patient was not discharged as cured until two or three such weekly examinations were negative. Obtaining negative cultures is also an aid in determining cures of trichophyton and achorion infections.

Table III shows a comparison of the total average days of treatment necessary for cure with different forms of treatment.

TABLE III

Duration of Different Forms of Treatment Effecting Cure

Treatment	No. Cases	Days of Treatment
Total epilation	32	44.9
Local area epilation with x-ray	6	58.3
Manual epilation under Wood's filter	3	61.0

It must be borne in mind in comparing the above figures that only the very early cases having one small area of involvement were treated with local x-ray or manual epilation. This treatment was given only to patients having very cooperative parents who were given a Wood's filter to use at home for daily removal of fluorescent hairs with adequate local therapy. The more severe cases, where extensive involvement was present, were completely epilated with x-ray and were cured in an average of 27.9 days after the hairs were removed.

SUMMARY

1. Fifty-two cases of tinea capitis are reported. The diagnostic characteristics and treatment methods are described.

2. In this series the animal or microsporon lanosum type was predominant and it seems that contact with infected pets is responsible for a large number of these cases.

3. The diagnosis should be made by clinical appearance, Wood's filter examination, microscopic study of hair and culture on Sabouraud's media.

4. Total epilation by x-ray therapy remains the treatment of choice in the majority of cases.

5. Tinea capitis is a disease principally of school children. It is a contagious and reportable disease.

6. An epidemic in Kansas can be avoided if all cases are reported, if diagnostic and treatment measures are standardized and if parents and school authorities are instructed as to the contagiousness of the disease and its proper handling.

New Salt Substitute

A new salt substitute called neocurtasal has been developed by the Winthrop Chemical Company and will soon be available in retail drug stores, meeting the demand for a product with the savor of salt without the properties forbidden in many diets. The palatable product contains no sodium and is described as "odorless, white, crystalline, consisting of potassium chloride, ammonium chloride, potassium formate, calcium formate, magnesium citrate and starch."

CANCER OF THE CORPUS UTERI

Cancer of the body of the uterus occurs far less frequently than does cancer of the cervix and yet it leads to one and one-half times as many deaths. This discrepancy is due to late diagnoses in cancer of the body of the uterus, for early treatment of cancer of the corpus should be even more successful than early treatment of cancer of the cervix.

Cancer of the corpus uteri tends to produce intermenstrual and postmenstrual bleeding. This may occur as an occasional or single tiny show of blood following coitus, vaginal examination, or some other trauma, or it may occur as a profuse hemorrhage.

Irregular bleeding during and after the menopause indicates cancer more often than not. When it occurs, diagnostic curettage should always be done even though polyps or myomata are present as the latter are found concomitantly in about 25 per cent of the cases of carcinoma of the corpus.

Intermenstrual bleeding in the younger individual may be due to cancer. Diagnostic curettage is indicated when the bleeding fails to react favorably to therapeutic measures in a short time.

The treatment of carcinoma of the uterus is radical surgery. Recent evidence would suggest that preoperative radium therapy may have merit. Radium therapy or definitive surgery are best instituted at the time of the diagnostic curettage when the diagnosis can be made at that time.

Prepared by Committee on Control of Cancer

KANSAS PHYSICIANS' SERVICE

Know Your Plan

The importance of every Kansas physician being thoroughly familiar with the details of our medical service plan was emphasized recently by an incident in a county-wide promotional campaign. A staff member was shocked by the statement of a voluntary worker that "her doctor was not in favor of the plan." Then a number of workers volunteered that their doctor "was not even a participating physician." Inquiry divulged they were referring to the same physician.

A member of the KPS Board of Directors, who happens to be an associate of the doctor, was asked to question him. The doctor was grievously offended. He resented the suggestion and implications. Why, of course, he was a participating physician. He certainly was in favor of the plan and wanted to support it and heartily approved of the principles, the motives and the objectives. Actually he was the first physician in Kansas to collect a fee from KPS; he had received check No. 1 for the original approved claim. He merely had tried to present the plan honestly and to point out the limitations. Lacking a clear picture of the subject and having an inadequate understanding of the benefits, he failed to give his patients comprehension of the broad advantages of membership.

The point of the incident is plain. It is vitally important that every Kansas physician study the details of the Member's Certificate carefully and thoroughly familiarize himself with the contract, the benefits under the plan, the limitations and exclusions, and the various ways the plan relieves our patients of the major financial problems related to illness and injuries.

Apparently Society members quite generally understand that coverage is provided for all surgery, all obstetrics, all fractures and dislocations, and practically all forms of accidents, all of these regardless of whether treatment be in the office, the home, the hospital, or elsewhere; and, in addition, that coverage is also provided for all other illness or injuries not covered by the above, if sufficiently serious to require more than three days in the hospital. It is true, of course, that minor ailments such as routine house and office calls are not included, nor are diagnostic procedures. X-ray up to $15 is furnished only in accidents. (Other diagnostic x-rays, diagnostic studies, and x-ray therapy would require an increase in the membership dues which would limit the enrollment and the opportunity to extend the plan benefits over the state with rapidity).

It is important that physicians have a well organized knowledge of plan details so they may impart to their patients an understanding of the limitations along with comprehension of the many benefits that are provided. Misunderstandings are frequent as to the waiting period for pre-existing conditions. After eight months of membership pre-existence is of no concern. Date of onset then is disregarded entirely. Until that time, however, benefits are not provided for tonsillectomy, obstetrical care at term, nor for any pre-existing condition such as hernia, fibromyomata, chronic salpingitis, or cholelithiasis, assuming there is reasonable ground for belief the patient knew of the condition on the effective contract date. Such conditions are covered only after eight months of membership, but are then covered without question, except that coverage is provided immediately for any acute condition arising, such as strangulation of a hernia, hemorrhage or acute inflammation in fibromyomata, or biliary obstruction with previously quiescent gallstones.

The Executive Committee has assumed the attitude that the purpose of the plan is to render a service to the patient and, therefore, in every questionable case tries to find legitimate grounds for payment of the claim. This is not to say the committee invites the physician to stretch the truth in presenting the supporting data. The fees and benefits are calculated on actuarial statistics that presuppose honest claim presentation. If the practice of paying unjustified claims become very extensive, the financial structure of the corporation could be damaged.

KPS furnishes us the most powerful instrument Kansas medicine has ever had for improved public relations.

KPS supplies the best answer to those who persistently cry out for socialization of medicine, a cry which, certainly, has not yet been stilled.

KPS renders a very genuine and a very broad service to our patients, and, incidentally, eases many administrative worries for the practitioner.

Making KPS most effective requires familiarity with the details of structure and operation, active presentation by every physician to his patients, and careful, complete answers for the questions that arise.

SO —

Read and study the contract, the schedule of benefits, the bulletins and literature sent out from the Topeka office;

Ask for enlightenment or explanation of any points not entirely clear;

Take the time to explain KPS to your patients;

Remember the group principle in enrollment and bear in mind presentation to key persons in groups eligible for enrollment;

And help the patient member to understand whether a service rendered is or is not eligible for coverage.—B. A. Nelson, M.D., President.

Public Education on Mental Problems

An expanded program of public education on the problems and needs of mental patients will be undertaken by the National Mental Health Foundation through grants of $25,000 each from Carnegie Corporation of New York and the Rockefeller Foundation, the health organization recently announced. Additional grants of $25,000 each have been promised in 1948, provided the foundation can raise $122,000 through popular subscription.

Started in April, 1944, by a group of young volunteer attendants in a Pennsylvania state mental hospital, the foundation has a three-point program: (1) to inform the public on the need for more progressive and humane treatment of mental cases; (2) to secure adequate mental health facilities in every state; and (3) to encourage better training for attendants in mental hospitals.

Owen J. Roberts, retired associate justice of the United States Supreme Court and president of the foundation's board of directors, in discussing the need for this type of work, said, "Although more than half of all hospital beds in the country are occupied by mental patients, until recently there has been little public concern for the 600,000 persons now in mental institutions, nor has there been an effective program for nation-wide public education on the nature of mental disorders. The National Mental Health Foundation is committed to just such a program, which requires the cooperation of all segments of our community life."

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

The Woman's Auxiliary to the Kansas Medical Society has grown beyond all expectations, which signifies the worthiness of its existence and the value of its varied programs. There were 774 members at the time of the state meeting in Topeka.

Health education to Auxiliary members has become a crusade in which they have been taught the difference between the diagnosis and treatment of disease, which is the work of the doctors, and lay health education.

Our magazine Hygeia has been placed, as it should be, in various reading and reception rooms where it can be read by many. The women have been intelligently active in our programs of cancer control, legislative endeavor, Kansas Physicians' Service and others. In all of their efforts committees have conferred with experienced members of our Society so their actions would be well directed.

These women have become better acquainted with each other, thus learning the similarity of problems. With this has come the realization of how much more can be accomplished when they work together.

This page is devoted to the Woman's Auxiliary to the Kansas Medical Society in the hope that the men of medicine in Kansas will give counsel and encouragement to the future efforts of the Auxiliary in the general plan of "Health Education" in its many ramifications in our state.

L. L. Nelson

President.

EDITORIALS

Senator Taft Speaks

One of the interesting features of an A.M.A. convention is the conference of presidents that immediately precedes it. On Sunday, prior to the opening of the A.M.A. centennial session, the third annual conference of presidents was held. At that time the Hon. Robert A. Taft, United States senator from Ohio, spoke. The title of his address was "Health Legislation in Congress." He introduced the subject by reviewing the scientific advances of the United States and all recent bills pertaining to research in the field of medicine. This, however, creates a problem "regarding the extension of federal activity in domestic fields." At the time that this is increasing, comes a clamor for a balance in the budget, and it is impossible to do this as long as all federal activities are being expanded.

The federal government at present recognizes the sovereignty of the state and assists only where states are unable to pay for their own necessities. As far as medical care is concerned, those who are unable to pay are now provided for under a great charitable system, all of which will be done away if the new Social Security measure as introduced by Senators Wagner and Murray is permitted to pass.

On basic principles the bill broadly defines benefits that are to be provided but gives almost no specific information with regard to details of tax collection or management. For instance, the bill states that a four per cent tax is to be collected, but no mention is made of how this will be paid. In the final analysis, it makes very little difference because the laborer will pay, regardless. Passage of this measure will create tremendous bureaus with personnel estimated from 250,000 to 750,000. In spite of the many promises that administration will largely be at the state level, all states must conform to federal directives, and therefore the power is vested in the federal agency.

Senator Taft dwelt on the misnomer of calling this insurance. It is not insurance, he stated; it is tax. When all persons are assessed to give service to all people, that becomes compulsory and as such is not insurance. It is tax. Another problem is immediately created. It is rapidly approaching a point beyond which the federal government may no longer tax its citizenry. Whenever that point is reached, all enterprise in the nation will be seriously retarded. By way of example, all states together raise $10,000,000,000 a year for all state taxes. The federal government raises $40,000,000,000 a year, or four times the total raised by the states.

If the Taft bill is passed, the Senator stated, there will be a sum of money available to the states without federal control. The state may use it in any way it pleases but the means test must be made in every instance. This is the heart of the bill. The money may be spent with existing voluntary prepaid medical care plans to strengthen those groups. In general, the Taft bill will give care to 20 per cent of the people who have already largely been cared for, but for whom the physician has not been adequately paid. The other bill currently before the Congress proposes to give care to 95 per cent of the people.

"Shall we therefore," he said, "take our present system, the system of free enterprise, and improve that system, or shall we control and regulate everything that every doctor does?"

It Says Here . . .

It says here that you feel a lot better for expressing yourself, so this humble contributor expects to be a well man in a few moments—or just as soon as he gets this out of his system.

A few weeks ago the American Medical Association completed its first one hundred years and in very good shape, too—it says here. The public loves the A.M.A. and wishes it continued freedom from federal control and other problems that might beset a century old body. Its method of operation is the envy of every professional organization on earth, including the American Bar Association, it says here.

Mr. Rich didn't think the public was knocking itself out applauding the A.M.A., but his opinion was purely personal for he resigned during the Atlantic City meeting. Mr. Rich was hired to make a public opinion survey and, when advised that critical comment was not desired, resigned. But no centenarian likes to be told his joints are creaking, it says here.

Whether the method of operation is actually envied by other organizations we do not know from personal experience, but will wager that more than one group would be intrigued. As note this example, for instance:

Some layman took the trouble to send a telegram to the president of the A.M.A. Its message was not immediately divulged but judging by the consternation of those who knew, it must have said something other than happy birthday. What should the House of Delegates do by way of reply?

First, according to the chairman of the Board of Trustees, the room must be cleared of all except delegates because others could not be trusted for a discussion of this kind. Now the telegram said something about a federal plan for medical care

and may even have been sent by a senator from Montana or someone like that. At any rate it was released to the newspapers before delivery to the A.M.A., but that made no difference. The House of Delegates must have an executive session—and did, it says here.

Many presidents of state medical societies were escorted out of the room by the sergeant-at-arms, including the president from Kansas. It was a solemn occasion and a memorable one on this hundredth anniversary. Deliberations must have been heated because they took a long while. And the result? The result is an official secret, and a comma may be out of place here or there, but this is the reply that was born in that secret room. "Your message received and contents noted. Sincerely." So much for methods of operation and envy.

The centennial celebration at Atlantic City left one more stirring impression within this visitor from the Kansas farms. We had not ever before seen such regard for the power of the pen. The House of Delegates, may it be known, is an august body, meeting for hard work all through the session. You will find no concession stands anywhere near, no cold drinks, no peanuts. Such things simply do not occur to the spectator and possibly never occurred to the delegates themselves.

But directly in front of the door a book salesman set up a stand. Selection was limited but to all appearances the supply held out, and that relieved everyone for there really wasn't much of anything else to buy without walking a long distance. To be sure it was highly proper—the book was "A History of the American Medical Association—1847-1947" and the author (properly also) was the editor of the Journal.

The author paid very little attention to the progress of sales. He was busy. You recall this was an historic occasion and outstanding physicians from many foreign lands had come to pay their respects and many brought gifts. Guests were introduced to the House of Delegates where the dignitaries of the A.M.A. acknowledged their presence. The chairman of the Board of Trustees was there and the secretary-general manager. Dr. Lull is an impressive leader even when he does nothing more than listen. When he spoke a few months ago here in Kansas, we were much pleased with everything he had to say. He is a splendid person and every doctor should be proud to have him manage the affairs of the parent body. At Atlantic City he showed no outward interest in the sale of the editor's treatise so perhaps there was nothing assigned for him to talk about.

Yes, the introduction of the guests perhaps, but that was being cared for by the author of the book, who did it well, of course, but he had also to accept an occasional gift for the A.M.A., so in the final accounting it appears that the representative from the publishing house was about the only person in the room really trying to sell the book.

And so the A.M.A. became 100 years of age and your visitor learned a number of things—it says here.

Sickness Benefits for Railroad Employees

Railroad workers became eligible on July 1 for cash sickness benefits. It will be recalled that these were added to the Railroad Unemployment Insurance Act by Congress in 1946 to provide compensation for wage loss due to disability the same as compensation is provided for loss of wages due to unemployment.

It is estimated that during the first year approximately 300,000 of the 2,000,000 railroad workers in the United States will receive benefits under this cash sickness program. The total amount of benefits to be paid is expected to reach $36,000,000. It is estimated that 650,000 medical examinations will be required in the course of the next year besides all forms of medical care. This, then, becomes one of the first large-scale medical care programs in which the federal government assists in defraying expenses.

Any disability that prevents railroad employees from working, regardless of how or where it occurs, is to be covered under the program. Payments will continue over extended periods or as long as the physician certifies that medical care is neecssary and that the railroad employee is not able to return to work. It is specifically stated that each employee may select the physician of his choice but, as in all programs, there will be reports to make and forms to be filled out.

The first physician seeing the patient during any illness will make out a "statement of sickness" which shall describe the nature of the illness and must be sent to the nearest regional office of the Railroad Retirement Board within seven days after the first day claimed as a day of sickness or the employee may lose part of his benefits. At any time the office may request a "supplemental doctor's statement" which will describe the progress of the patient and give further information. Payments will be made for 14-day periods, but if the physician's preliminary report gives adequate information the Board may accept that in lieu of continued 14-day supplemental reports.

The nearest regional office of the Railroad Retirement Board for the eastern half of the state is at Kansas City, for the west, Denver. In each of these offices there will be a physician who will act

as medical consultant. Inquiries are welcomed and may be addressed to the nearest regional office.

V. A. Telephone Regulations

Officials of the Veterans Administration have been pleased with the operation of the plan to give examinations and treatment to veterans in Kansas, but they feel that some phases of procedure, especially the regulations concerning telephone calls, have been overlooked by a number of physicians. The policy of the Veterans Administration in paying for long distance calls is repeated here to explain the matter fully to physicians cooperating under the program.

Treatment for veterans should be authorized in advance. This may be done by mail or by telephoning the office of the Medical Coordinator, Medical Service Center, Veterans Administration, Topeka, but it must be emphasized that such calls may be made at government expense only if the case is of *emergency* nature. Any physician may telephone the office at any time, but he must assume the expense himself if the call is not of emergency nature.

Recommendations of Hospital Association

Strong recommendations to bring about closer coordination between federal and non-federal hospital planning have been sent to all members of Congress and hospital and health authorities by the American Hospital Association, according to announcements made last month by John H. Hayes, president. The recommendations, if accepted, would establish a basis for setting up machinery to integrate the two hospital systems wherever possible. Lack of present coordinated planning between the two groups formed the basis of the study just completed by the Association's Council on Government Relations and its Committee on Veterans Relations.

The study was made to determine the effect of a large federal hospital program in relation to present non-federal hospitals and to recommend an effective method of correlating both programs for the best hospital care for all citizens. Consideration was given to the Hospital Survey and Construction Act and legislation now before Congress.

Dr. Dallas G. Sutton, who directs the Association's study of government hospital relations, reported that the Veterans Administration program, at present and in blueprint the biggest federal hospital group, has proceeded on the basis of minimal integration with other federal hospital systems and none whatever with non-federal hospitals. Before planning can be done, Congress must decide whether it wants a separate hospital system for veterans or wishes to consider care for the population as a whole on the most economical and effective basis.

In reporting on the study, the association mentioned that three points are important in a restudy of Veterans Administration planning.

1. While Congress has never officially declared itself ready to provide hospitalization for all non-service-connected cases, it has approved the planning of veterans' hospitals on that principle. The report recommends a restatement of the law so that the intent of Congress will be clear.

2. The next question raised is the desirability of creating a governmental hospital system of tremendous proportions. Costly construction, difficulties in administration, maintenance of desirable standards and present impossibility of staffing a large number of hospitals with competent personnel were listed as a few of the obstacles that would have to be surmounted. The study group fears the effects of political pressures from local communities.

3. The Veterans Administration has not made full use of vacant beds in military hospitals, nor has it considered locating hospitals with full regard to the population as a whole, the report charges.

It was also said that Veterans Administration hospitals are being planned without regard to service to the total population or to the proximity to non-federal hospitals except in those areas where they may be used to supply consultative and educational services.

In 1946 a special committee appointed by President Truman recommended that veterans with service-connected disabilities be provided hospitalization and medical and surgical care in both government and community hospitals; that the federal government not undertake to furnish medical and hospital care for veterans with non-service-connected disabilities except when there were surplus facilities and the veteran was unable to pay for care; that in planning a veterans' hospital building program, veterans requiring long-term hospital care be given consideration, and that the Veterans Administration utilize to the fullest extent all available facilities in Army, Navy and Public Health Service hospitals, holding to the minimum its own building program.

The American Hospital Association report recommends that an authoritative agency be created by Congress. This agency, with the advice of recognized federal and non-federal hospital authorities, would set up a method for integrating all hospital planning, and would be charged with the responsibility of recommending the methods by which federal funds should be invested in the future to provide the highest quality of care to all people on the most economical basis.

Quarterly Vital Statistics

Approximately 973,000 births were registered in the United States in the first quarter of 1947, according to preliminary estimates released last month by the National Office of Vital Statistics. This is 46.5 per cent more than the 664,000 births estimated to have been registered in the first three months of 1946, and is 29 per cent more than the number recorded in the first quarter of 1943, the year which held the record for births until outstripped by 1946.

Deaths in this country are estimated to have totaled 388,000 in the first three months of this year, the same estimated number as that for the first quarter of 1946. In 1946, however, there was a mild epidemic of influenza and other respiratory infections that increased the number of deaths in January over the number recorded in non-epidemic years. In 1947 the incidence of influenza increased in March and the provisional death rate reported for March was higher than for that month in any year since 1943. The death rate for the past March was 11.3 per thousand population, as compared with 11.7 for March, 1943.

STATE INSTITUTIONS

State Sanatorium for Tuberculosis, Norton

In this, the fourth of a series of articles on state institutions, the Journal presents information on the plan of the State of Kansas, through the State Board of Social Welfare, to care for patients having tuberculosis. Articles printed in former issues have covered Kansas hospitals for the insane, the hospital for epileptics, the school for feeble minded, the University of Kansas Hospitals, and laws governing sterilization of patients.

The State Sanatorium for Tuberculosis is located at Norton, with additional examination facilities at the Hillcrest Division at Topeka. Approximately 380 patients are now cared for at Norton, and the number of patients seen at Hillcrest ranges from 12 to 18 for any given time.

Facilities at the sanatorium are available at all times to any person with tuberculosis who has been a resident of Kansas for one year or more, although others are often admitted and non-residents may be admitted without delay in cases of need. There is provision for quarantine of patients having tuberculosis, but legal commitment is seldom necessary and it is estimated that 99 per cent of the patients at Norton now entered the sanatorium voluntarily.

Applications for admission to the sanatorium may be secured from the State Board of Social Welfare or from the health officer of any county in Kansas. These applications are made up of three statements: (1) the patient's request for admission; (2) the report of the patient's physician; (3) the recommendation of the State Board of Social Welfare that the patient be admitted. After the application is completed, the patient is referred to the sanatorium at Norton or to Hillcrest, which is operated as an adjunct to the sanatorium.

Patients sent to Hillcrest undergo complete examination there, where a sorting clinic is maintained. After examination each patient is classified in one of three categories: (1) those who do not have tuberculosis, even though previous symptoms have led to that diagnosis; (2) those who have tuberculosis in inactive stages; (3) those who have active tuberculosis. Patients found to have the disease are then sent to Norton for treatment.

In addition to treating patients at Norton, the state maintains 20 patients from Norton at the Eleanor Taylor Sanatorium in Kansas City, operated as a part of the University of Kansas Hospitals group. Through this arrangement the University School of Medicine teaches the treatment of tuberculosis to students.

The financial status of tuberculosis patients is of no concern in the operation of treatment facilities. The state provides medical care and hospitalization without cost, although those who are able to pay may do so voluntarily. Patients who wish to reimburse the state may pay all or any portion of their expenses.

The doctor-patient ratio at Norton is one to 120, while the desired ratio is one to 60, and a similar situation exists in regard to nurses. Such shortages of professional workers existed throughout the country during the war years, however, and it is thought that that condition will be improved in the future.

It has been mentioned also that examination facilities now available, such as mass chest x-ray surveys, will discover many early cases of tuberculosis that would have been undetected under earlier diagnostic methods, and make possible the treatment of such cases on an outpatient basis, thus cutting down the number of patients who will require hospitalization for tuberculosis in future years.

Metopon Hydrochloride

The National Research Council, through its Committee on Drug Addiction, has been conducting a study on drug addiction and a search for a non-addicting analgesic comparable to morphine since 1929, when funds for the research were provided by the Rockefeller Foundation. Cooperating are the Universities of Virginia and Michigan, the United States Public Health Service, the Treasury Department's Bureau of Narcotics, and the Health Department of Massachusetts, which brought together chemical, pharmacological and clinical facilities. Metopon is one of the many compounds made and studied in this coordinated effort.

Chemically metopon is a morphine derivative; pharmacologically it is qualitatively like morphine, even to the properties of tolerance and addiction liability. Chemically it differs from morphine in three particulars: (1) one double bond of the phenanthrene nucleus has been reduced by hydrogenation; (2) the alcoholic hydroxyl has been replaced by oxygen; (3) a new substituent, a methyl group, has been attached to the phenanthrene nucleus.

Studies made thus far indicate that pharmacologically metopon differs from morphine quantitatively in all of its important actions; its analgesic effectiveness is at least double and its duration of action is about equal to that of morphine; it is nearly devoid of emetic action; tolerance to it appears to develop more slowly and to disappear more quickly, and physical dependence builds up more slowly than with morphine; therapeutic analgesic doses produce little or no respiratory depression and much less mental dullness than does morphine; and it is relatively highly effective by oral administration.

Metopon will be available only in capsule form for oral administration. The capsules will be put up in bottles of 100, and each capsule will contain 3.0 mgm. of metopon hydrochloride. They can be obtained by physicians only from Sharp and Dohme or from Parke, Davis and Company on a regular official narcotics order form, which must be accompanied by a signed statement supplying information as to the number of patients to be treated and the diagnosis on each. The drug will be distributed for no other purpose than oral administration for chronic pain relief in cancer cases.

The dose of metopon hydrochloride is 6.0 to 9.0 mgm. (two or three capsules), to be repeated only on recurrence of pain, avoiding regular by-the-clock administration. As with morphine, it is desirable to keep the dose at the lowest level comparable with adequate pain relief. Therefore, administration should be started with two capsules per dose, increasing to three only if the analgesic effect is insufficient.

To each physician will be sent a record card for each patient to whom metopon hydrochloride is to be administered. He will be requested to fill out these cards and return them, and he must furnish this record of his patient and his use of the drug if he wishes to repeat his order. This limited use has been recommended by the National Research Council, and the program will be supervised by its Drug Addiction Committee with the cooperation of the American Cancer Society.

Queries and comments on metopon may be directed to Dr. Nathan B. Eddy, National Institute of Health, Washington, D. C.

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COUNTY SOCIETIES

Officers for 1948 were named at a meeting of the Sedgwick County Medical Society held at the Broadview hotel on May 27. The following were elected: Dr. J. E. Wolfe, president; Dr. J. S. Hibbard, vice president; Dr. N. L. Francis, secretary; Dr. J. L. Beaver, treasurer; Dr. A. P. Gearhart, board of censors; and Dr. J. V. Van Cleve, Dr. C. W. Miller and Dr. A. E. Hiebert, board of directors.

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Members of the Labette County Society were entertained at a buffet supper at Mercy hospital, Parsons, on May 28 with members of the Auxiliary as hostesses. A program followed the supper.

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A joint meeting of the Wilson County Society and Auxiliary was held at the Cafe Marea at Neodesha on May 28. The groups held separate business sessions after the dinner.

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The Crawford County Society met May 29 at the Hotel Besse, Pittsburg. Dr. E. E. Miller discussed "Bronchoscopy and Indications for Same" and Dr. C. W. Erickson and Dr. C. H. Benage reported on the state meeting held at Topeka.

* * *

Members of the Clay County Society entertained the Clay County Auxiliary and a number of other guests at a dinner meeting at the Clay Center country club on May 14. An informal program was given. Guests for the occasion were members of the state legislature from that part of the state and doctors and Auxiliary members from Topeka, Salina, Junction City, Manhattan, Concordia and Hunter.

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The Douglas County Society held its annual dinner at the Lawrence country club June 10. Guests were three members of the Kansas legislature, Dr. John L. Lattimore of Topeka, and Mr. Charles Stough and Mr. Ed Abels, both of Douglas county.

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The Washington County Society met with the county commissioners and the county hospital board June 9 at Washington. Plans for a new county hospital were discussed.

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Members of the Riley County Society entertained the Golden Belt Medical Society at Manhattan July 3. A scientific program was presented during the afternoon. Dr. L. E. Eckles, Topeka, spoke on "The Problem of Diphtheria," Dr. Robert L. Newman, instructor of obstetrics and gynecology at the University of Kansas Medical Center discussed "Emotional Factors in Pregnancy," and Dr. Walter F. Kvale of the Mayo Clinic, Rochester, Minnesota, discussed "The Clinical Use of Anticoagulants." A dinner at the Manhattan Country club and an informal program followed the scientific session.

* * *

Members of the Russell County Medical Society presented an educational movie program in Russell on June 26, 27 and 28 to show the residents of that area the developments of medical science. The program included the latest March of Time release, "Your Doctors—1947," and pictures made available by the Red Cross and the Kansas Crippled Children's Commission.

A meeting for the purpose of reorganizing the Southeast Kansas Medical Society was held at the Chanute country club June 22, with members of the Neosho County Society extending the invitation. Dr. Paul Shaeffer, assistant professor of surgery at the University of Kansas Medical Center, discussed "Problems Associated with the Diagnosis and Treatment of Gastric Ulcers and Malignancies."

MEMBERS

Dr. Lyle S. Powell, Lawrence, is moving to San Diego, California, and will open an office there for the practice of ophthalmology. Dr. Richard L. Dunlap, formerly with the Santa Fe hospital in Topeka, is taking over Dr. Powell's practice in Lawrence.

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Dr. A. D. Danielson and Dr. J. O. Gilliland, Herington, announce that Dr. Fred S. Dozier, formerly of Dallas, Texas, is now associated with them in practice. Dr. Dozier is a graduate of Baylor Medical School and practiced in Dallas before entering the service in World War II.

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Dr. J. H. Baker has announced that Dr. C. W. Wilson is now associated with him in the Baker hospital at La Crosse. Dr. Wilson, a graduate of the University of Kansas School of Medicine, completed a postgraduate course in neurology at Iowa University after his release from the Navy.

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Dr. M. W. Hall, who was recently released from the Army medical corps, has returned to Wichita and has reopened an office for the practice of gynecology.

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Dr. E. H. Clayton was elected president of the board of directors of Mercy hospital, Arkansas City, at a meeting held last month. Dr. J. L. Wentworth is vice president and Dr. W. G. Weston is secretary.

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Dr. John J. Hill is now associated in practice with his brother, D. E. R. Hill, Lyons.

* * *

Dr. William E. Grove, Newton, has gone to Boston to be resident surgeon at the Lahey clinic.

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Dr. Edmer Beebe, Olathe, is now sharing his office with Dr. Conrad C. Clement, who was stationed in Olathe while serving in the Navy. Dr. Clement is a graduate of the Yale School of Medicine.

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Dr. J. V. Sharp, who specializes in pediatrics, has become a member of the Weston clinic, Arkansas City.

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Dr. H. L. Graber, formerly with the Sedgwick County Hospital, Wichita, has opened an office for practice in Nickerson.

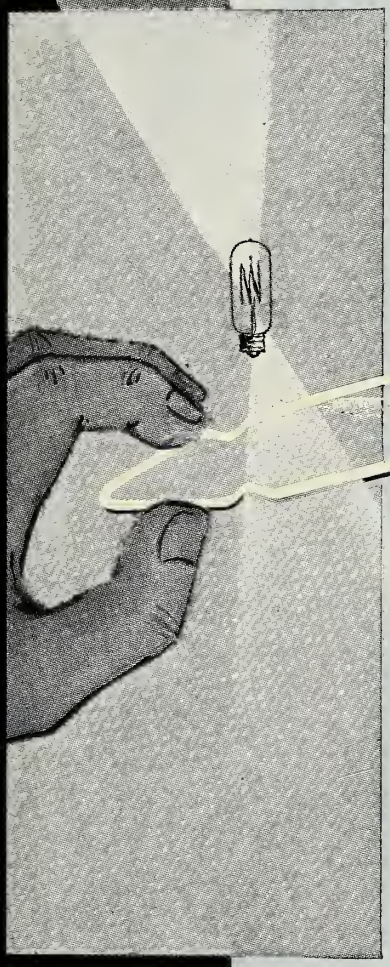
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Dr. Peter E. Hiebert, Kansas City, became a fellow of the American College of Radiology at its meeting in Atlantic City last month.

* * *

Dr. Harold H. Woods, Topeka, announces that Dr. Donald D. Bauer is now associated with him in the practice of radiology.

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THE KANSAS PRESS LOOKS AT MEDICINE

Editor's Note. Material reprinted in this column reflects the editorial opinion of Kansas publications. Favorable as well as critical opinions will be selected to inform the membership on how the Kansas press regards the medical profession. Opinions expressed in this section are entirely those of the publication from which items are taken and are not necessarily those of the Editorial Board.

The Public Health

With Congress considering a number of proposed measures designed to improve the public health, certain definite principles should be kept firmly in mind.

First, nothing must be done that will prevent people from choosing their own doctor. That is basic in sound medical practice.

Second, medicine must not be regimented. The doctor must never be dominated by a government official—required to look to some bureau for his livelihood.

Third, we must avoid the mistake of forcing people to pay for a specified medical service whether they wish it or not. Voluntary prepaid medicine is one thing—compulsory tax payments for a service individuals may not desire is something very different.

Fourth, we must confine Federally-financed medicine to care for the needy, so far as treatment of the individual is concerned. It is a proper public service for the taxpayers to underwrite medical care for those who honestly cannot pay for it themselves. It is not a proper service to finance it for those who are perfectly able to pay for it.

Fifth, administration must be accomplished at the local, community level—not at the Washington level, with its inevitable wasteful and inefficient bureaucracies.

The goal should be to preserve private medicine—and at the same time to help the indigent. This can be done with a minimum of expense—and without creating still another ever-expanding Federal bureau with an enormous payroll.—*A. Q. Miller in the Belleville Telescope, April* 3, 1947.

* * *

Socialized Medicine Again

Now and then the drive against private medicine comes into the open. The Industrial News Review calls attention to a recently published pamphlet, "Blueprint for the Nationalization of Medicine," which shows in considerable detail, that an aggressive, well-organized campaign is under way to virtually enchain the practice of medicine with bureaucratic controls and thus pave the way for eventual socialization.

It is pointed out, in this instance, that those who think American doctors alone are concerned, are mistaken. It comes home to everyone who may have to consult a physician or go to a hospital. Despite the arguments of the pamphleteers, bureaucratized medicine is non-progressive. With government workers and government doctors in charge of treatment of the public's health, the public stands to suffer. The average employe of the state has little incentive to experiment, to work harder than his actual job demands, to develop his knowledge and his talents, to take time off to attend post-graduate courses and meetings of leaders in his kind of work.

The government workers placed in charge of a government medical program more than likely would be more concerned with keeping and bettering their positions on the public payroll—pleasing political superiors who wield the power of promotion and demotion. The present system of private medicine would suffer under such supervision. Medicine, as developed throughout the U. S. today, knows no superior. The problem of paying for medical care has largely been solved by the expansion of voluntary prepayment plans which offer complete service at moderate cost. Moreover, government aid can be given to those who need it without endangering the structure of medical practice. The American people should not surrender the high status of medicine in order to bring so-called government aid to those few who actually need it. No matter how well intentioned, socialization would destroy the present American system and substitute a deadening anesthesia of government bureaus. Surely the high plane now attained should be safeguarded.—*E. T. L. in Emporia Gazette, March* 7, 1947.

* * *

From The Editor's Desk

Today's Daily Sun carries the news story that the Wilson County Hospital Board has voted to close the hospital here on May 1.

The reason given is that there are not enough nurses available to provide an adequate staff.

We have not had time to dig out the pertinent facts, but we believe that the closing of the hospital could and should be avoided. If it is closed, even for a month, it will be a major tragedy to Neodesha as well as all of the territory around here and the rest of the county.

With other hospitals in nearby towns filled to capacity all of the time, it would leave the people of this section almost entirely without hospital facilities.

And even if they could go to other towns, such facilities would not be much good in emergency cases.

We do not want to see Neodesha and Wilson County without a hospital. The Wilson County Medical Society has gone on record as being strongly opposed to closing the hospital. Every civic group as well as every citizen of the county would, we believe, endorse that stand.

It is time for the citizens to get aroused and see to it that their own public hospital is not closed. Action must be taken and must be taken quickly. Civic clubs should appoint committees to work with the Medical Society in a move to keep the hospital open.

The statement that help is not available is a broad one and is most certainly open to question. Trained help is short in almost every business, but businesses manage to keep operating. We believe the hospital could do it too.

If it takes more money, shorter hours, better working conditions—whatever it takes—the board should be able to arrange it.

The hospital is a vital need to our community and county. It belongs to the people. It should not be closed. Let's have some action.—*Neodesha Daily Sun, April 11, 1947.*

Medical Care and the Public Health

There is confusion in many minds as to the relationship of medical care to the public health—and this confusion is undoubtedly responsible for considerable public support of incredibly costly government 'health insurance" schemes which would force every one to pay for it whether the service was desired or not. One authority described that relationship in these words: "Medical care is only a part, and by no means the most important part of the problem of health. Medical care is the care of the sick and injured. Health consists in not being sick or injured, and depends almost entirely upon sanitation, hygiene, safety factors, health education, good nutrition, good housing, adequate



DO YOU KNOW WHAT THESE SYMBOLS STAND FOR?

In medieval times, the dragon was the symbol of the chemist and apothecary. Ancient alchemists were said to use dragon's blood in their potions, and the dragon came to mean certain chemical actions. An apothecary advertised his wares to the world by painting a dragon on a drug pot, and hanging it over his door.

Today it is the familiar Rexall sign which assures you of superior and dependable pharmacal service. Displayed over more than 10,000 independent drug stores throughout the country, the Rexall symbol on drugs means pure, potent and uniform drugs, laboratory tested under the rigid Rexall system of controls. It means unexcelled pharmacal skill in compounding them.

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DRUGS
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REXALL DRUG COMPANY
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PHARMACEUTICAL CHEMISTS FOR MORE THAN 44 YEARS

clothing, sound working conditions, and the control of patent medicines and cults."

So far as medical care is concerned, it is available to almost everyone. Voluntary prepayment plans bring first class service, in which the patient may choose his own doctor, within the reach of workers and families at a cost which is usually less than $5.00 per month. There is undoubtedly a relatively small group of completely indigent people who are not able to obtain sufficient care now—but this deficiency may be corrected through government aid without creating a gigantic bureaucracy which would cost four to six billions a year, create a medical monopoly, and place political appointees in positions of sweeping power over the practice of the healing arts.

The public health can be improved only by preventing those things which cause sickness and accidents. It is a delusion to suppose that bureaucratic domination of medicine, which is the first step toward socialized medicine, would do anything except undermine the initiative and will of doctors to learn.—*Wichita Sun, March 28, 1947.*

* * *

They Wouldn't But They Could

Convening of the Kansas Medical Society in Topeka reminds us that a current magazine short story is built around an imagined doctors' strike a few years hence.

Fantastic, you say. Doctors wouldn't think of going on strike.

Of course they wouldn't. The medical profession we know today is made up of a caliber of men too conscious of their duty to society to entertain the idea of achieving any goal thru such an extreme method. Besides, the great majority of physicians are self-employed, relatively few of them working as employes for fixed salaries.

Yet the number of doctors who are salaried employes of some form of management is a growing number. Ultimately, say under some form of socialized medicine, it is not inconceivable that employe-physicians might seek to better their pay or working conditions by collective bargaining.

Probably even then there would be no strikes, the ethics of the medical profession being what they are. However, the strong likelihood that doctors would never strike to gain an objective does not mean they have no right to strike. No individual can be forced to work so long as slavery is illegal. The much-bruited right to strike belongs to any worker. Theoretically it should be no more unreasonable for doctors or nurses to abandon their patients and to picket hospitals than it is for workers in such essentials as food, clothing and shelter to go on strike and picket.

Nevertheless, the trend in America has been to say that some citizen workers have a right to strike and other citizen workers do not have it. Even union members would be indignant and cite the public welfare if such public workers as policemen and firemen were to refuse to make arrests and put out fires.

Thus the strike method is not now recognized or encouraged in practically all of the government worker unions and, to cite a nongovernmental example, in the American Federation of Labor nurses unions. An official of the A. F. of L. is on record with this statement:

"Nursing is a humanitarian occupation and therefore the nurses guild is prohibited from striking by the A. F. of L."

The thing that interests us is that government worker unions and what nurses unions there are have managed so far to represent their memberships constructively without claiming or making an issue of a right to strike. Evidently the methods used take into account first of all a need to protect the dependent public.

If those "humanitarian" considerations are valid and yet permit of successful labor representation, how about our labor statesmen showing the way to an application of the same safeguards and methods for unions in private industry?

Private industry unions should think over the example of the self-imposed restrictions in firemen's and nurses' unions. There is a lesson in democracy in these voluntary limitations upon any absolute right of any individual not to work.—*Topeka State Journal, May 13, 1947.*

Revision of Pharmacopoeia

The first meeting of the committee working on revision of the Pharmacopoeia, volume XIV, was held recently in Atlantic City, and as a beginning the committee compiled information from questionnaires sent to 150 medical specialists and all medical colleges in the United States, different councils of the American Medical Association, the Food and Drug Administration, and the U. S. Pharmacopoeial Commissions of Puerto Rico, the Philippines and Cuba.

This 40-page questionnaire listed all of the items recognized by the U. S. P. XIII, and the N. N. R. 1946, and included numerous other medical substances believed worthy of consideration. These were arranged according to their medical use and the physicians answering were asked to express their opinions of values. The questions asked were: (1) is the substance essential in medical practice; (2) if not essential, is it of high value; (3) is it of questionable value.

Additional U. S. P. studies are now being made by special groups of widely known authorities in dermatology, ophthalmology, roentgenology, allergy, anesthesia, germicides, amino acids and related products.

The U. S. P. was established by the medical profession in 1820 for the purpose of evaluating the medicines then available and listing and standardizing the drugs and preparations believed most useful and important in medical practice. Later the physicians asked the assistance of apothecaries in selecting the best quality of medicinal materials and in devising formulas for preparations.

Death Notices

BENJAMIN F. MALLORY, M.D.

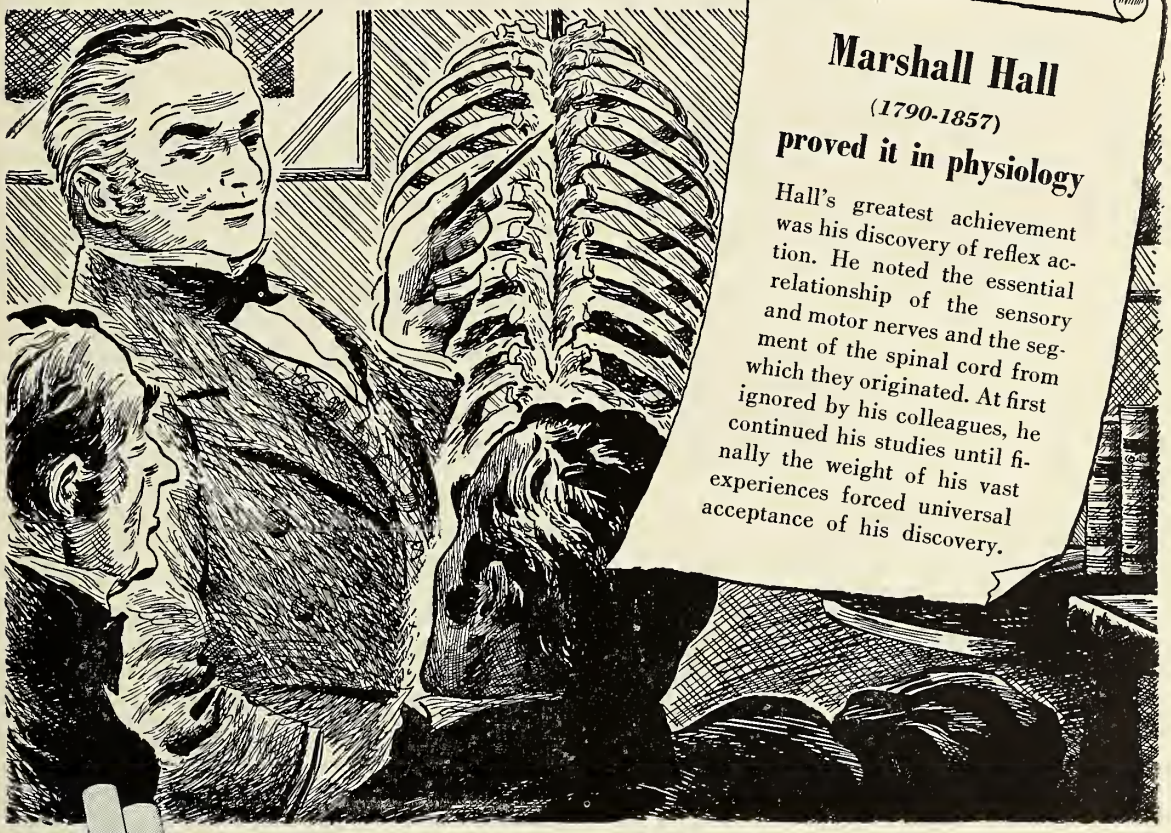
Dr. Benjamin F. Mallory, 76, a member of the Reno County Medical Society, died at his home at Arlington June 3. He was graduated from Missouri Medical College, St. Louis, in 1897 and had practiced in Arlington since 1901. He had retired from active practice a few weeks before his death.

* * *

THADDEUS P. MARTIN, M.D.

Dr. Thaddeus P. Martin, 69, who had practiced in Topeka for 39 years, died at his home June 7, after having suffered a heart attack three months ago. A graduate of Leonard Medical School, Raleigh, North Carolina, Dr. Martin opened his office in Topeka in 1908. He was a member of the Shawnee County Medical Society.

Experience is the Best Teacher



Marshall Hall

(1790-1857)

proved it in physiology

Hall's greatest achievement was his discovery of reflex action. He noted the essential relationship of the sensory and motor nerves and the segment of the spinal cord from which they originated. At first ignored by his colleagues, he continued his studies until finally the weight of his vast experiences forced universal acceptance of his discovery.





Yes, experience is the best teacher in smoking too!

IT WAS their experience during the wartime shortage of cigarettes which taught people the big differences in cigarette quality. People smoked many different brands then—whatever brand was available. And so many more smokers came to prefer Camels as a result of that experience that now more people are smoking Camels than ever before. However, no matter how great the demand, *we don't tamper with Camel quality. Only choice tobaccos, properly aged, and blended in the time-honored Camel way, are used in Camels.*

According to a recent Nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

ABSTRACTS

Lower Nephron Nephrosis

Article by Col. Baldwin Lucke, M.C., The Army Institute of Pathology, Washington, D.C. Published in The Military Surgeon, Volume 99, Number 5:371-396; November, 1946.

The author reports on 538 fatalities in which occurred characteristic renal lesions peculiar to the lower nephrons, caused by a wide variety of systemic insults, and resulting in renal insufficiency, uremia, and death.

The precipitating factors include battle wounds, crushing injuries, abdominal operations, burns, blood transfusion reactions, sulfonamide intoxication, heat stroke, malaria, chemical poisons, hemolytic anemia, utero-placental damage and pancreatitis.

Clinically, shock and vomiting appear early. Blood pressure falls at first and then progresses in two to three days to hypertensive levels as oliguria and uremia develop. The urine becomes scant, of low specific gravity, highly acid, and usually contains blood and heme compounds, protein, and granular and pigmented casts. Azotemia increases, edema appears, and the usual uremic coma and death follow.

Death occurred in one to 20 days; more commonly from the third to the tenth day with the peak at seven days.

The renal pathology consisted of pale, swollen kidneys with pale cortical zones and purplish brown medullary areas. Microscopically there is characteristic focal degeneration or necrosis of the distal or lower nephron proximal to the collecting tubules, and involving the thick ascending loop of Henle and the convoluted tubules. Interstitial inflammation is evident in these regions. Pigmented (heme), and hyaline casts appear in the lower nephron and collecting tubules.

Pathogenesis is not clear. The author's suggestion is that diminished blood flow to the kidneys which occurs in shock out of all proportion to the depression of the systemic flow, results in ischemia of the tubular epithelium which is then unable to resist the effects of toxic metabolites and undergoes degeneration and necrosis. Then, despite brisk glomerular filtration, the urine is unselectively reabsorbed through the damaged tubular walls with resultant anuria and uremia. The actual plugging of tubules by acid heme compound casts may contribute to the renal failure, but is probably not the primary cause of anuria.

Death from anuria with the characteristic tubular necrosis has occurred in the presence of alkalosis from persistent severe vomiting. In such cases the acid heme compound casts are absent. Hence, the author doubts that therapeutic alkalinization of the patient will be of avail. He tends to regard the casts as result, not cause, of the disturbed renal physiology.

The author emphasizes that the problem is one requiring further study.

The clinical implications to the reviewer appear to be based on the dictum quoted by the author, "Anoxia not only stops the machinery, but wrecks the machine." Efforts directed toward *the maintenance of adequate circulation and oxygenation during the stage of shock* would appear most fruitful; similar therapy after the renal damage has occurred is indicated, but of doubtful value.

The reader is tempted to speculate that these changes in the lower nephron may explain many of the cases of so-called "reflex anuria" encountered in the course of urological and other problems and procedures.

The article is exceptionally well illustrated and contains an exhaustive bibliography.—*T.P.B.*

Vitamin E in Therapeutics

Report of the Meeting of the Kansas City Academy of Medicine, April 11, 1947, Dr. E. V. Shute and Dr. W. E. Shute, London, Ontario.

The role of alpha tocopherol (the active factor in vitamin E) in large doses (200 to 900 mg. per day), as a new and important pharmaceutical agent in medicine and surgery is stressed. The speakers state that the principal therapeutic effects of the drug are to increase capillary dilatation and decrease capillary permeability resulting in improved circulation and oxygenation of tissues. The action on veins is said to be that of a "medical sympathetic bloc." Indication for use of the drug are based on these effects and are manifold. Iron offsets the action of tocopherol and should not be given concurrenty.

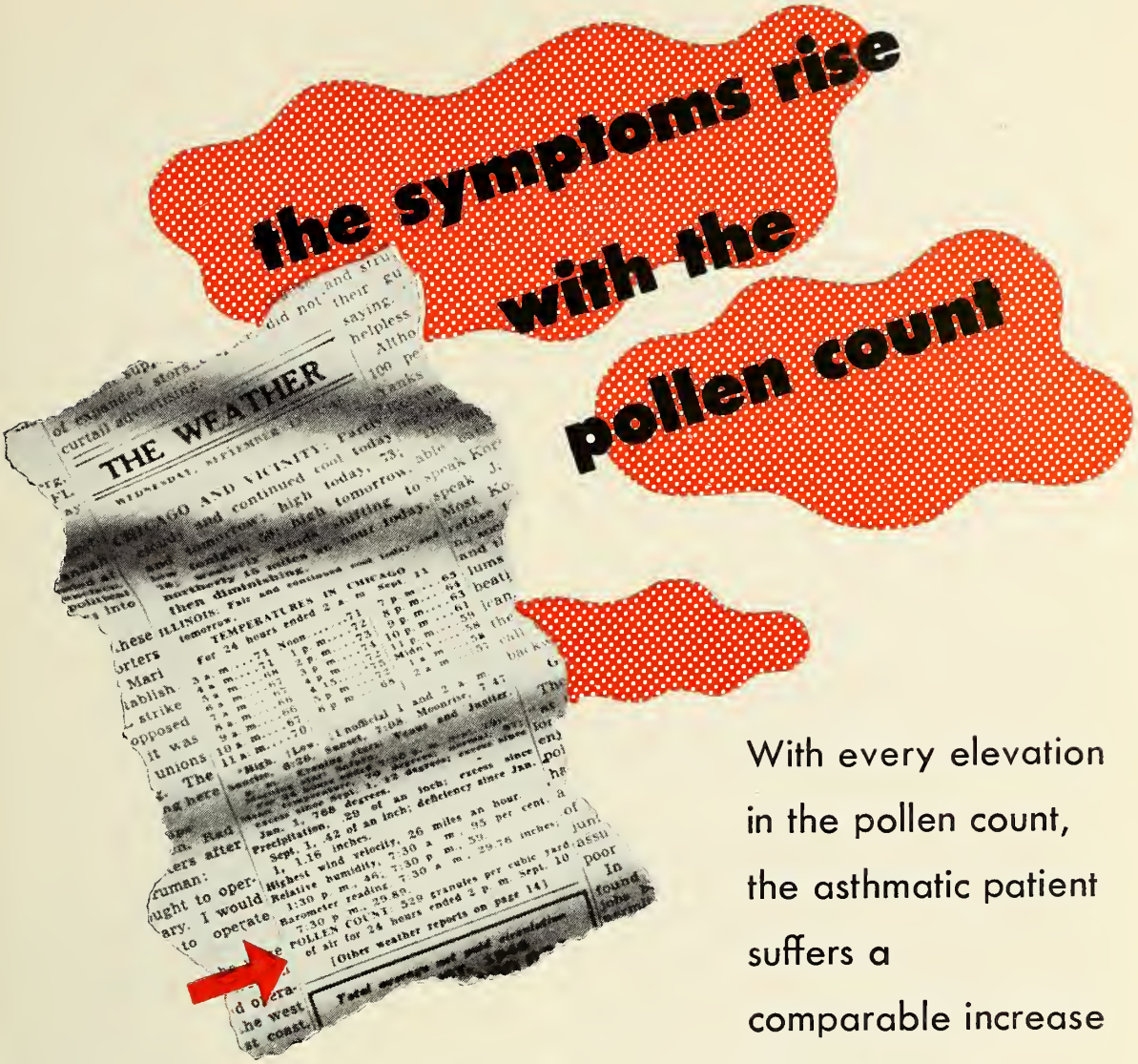
Deprivation of the drug results in disturbed cholesterol metabolism, loss of muscle creatine with creatinuria, increased oxygen consumption to 250 per cent of normal, and various cardio-vascular lesions in different animals. The original work done on rats happened to center upon abortion resulting from placental thrombosis and edema, which was relieved by administration of the drug in small (vitamin) quantities. Hence, the term "fertility vitamin," which is one of the less important aspects of its significance for modern therapeutics.

Conditions in which the drug is said to have been effective include; thrombophlebitis, Buerger's disease, cerebral thrombosis, angina pectoris, coronary thrombosis, hypertensive heart disease (not essential hypertension, however), rheumatic heart disease, wherever digitalis is indicated, the nephritides, anemias which improve without iron, impaired vision (retinal scotoma, etc.), paralysis agitans, neuro-circulatory asthenia, purpura-hemorrhagica (both capillary fragility and low platelet count being improved), and various acute inflammatory diseases. Some of the improvements noted are lost when administration of the drug is discontinued.

The speakers cite objective evidence of the drug's value in most of the foregoing instances. They suggest it be studied in tuberculosis, burns, osteomyelitis, pyelitis, chorea, diabetes, and delayed wound healing. They believe that an important effect may be the replacement of scar tissue by fresh blood vessels in some instances such as heart muscle infarction, Dupuytren's contracture, etc.

The drug is marketed by a number of firms, but it all comes from Rochester, Minnesota. Dosage must be considered as alpha tocopherol only—the other factors in "mixed tocopherols" being inactive. The indicated dosage in most conditions ranges from 200 to 500 mg. of alpha tocopherol daily, and in some instances up to 900 mg. for purpura. For threatened abortion 100 mg. per day is sufficient, and sperm are said to improve on as little as 10 mg. daily. Intra-muscular preparations are available where massive dosage is used. The over-all a supply of the drug is limited.—*T.P.B.*

Births reported in Kansas during March numbered 3,581—1,879 males and 1,702 females.



With every elevation in the pollen count, the asthmatic patient suffers a comparable increase in the severity of symptoms. In the dyspnea of allergic asthma, Aminophyllin has been found to provide efficient relief.

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RESEARCH
IN THE SERVICE
OF MEDICINE

BOOK REVIEWS

Book Reviews

Practical Physiological Chemistry—12th Edition. By Philip B. Hawk, Ph.D., Bernard L. Oser, Ph.D., and William H. Summerson, Ph.D. Published by the Blakiston Company, Philadelphia. 1323 pages, 329 illustrations. Price $10.

There are several hundred illustrations, charts, instruments, equipment, graphs, formulas and drawings. This book is primarily one for the biochemist but it contains many excellent chapters that are of very practical value to the practicing physician. There are good chapters on growth factors, such as metabolism of milk, fat and proteins. There are chapters of practical value on hormones, vitamins and antibiotics. There is a wealth of material dealing with the various phases of pathology, urine, blood, feces, gastric analysis and other procedures. This is an excellent book, well arranged and written, and can be recommended for all those interested in this type of material.—*J. L. Lattimore, M.D.*

Books Received

Gynecology (with a Section on Female Urology). Second Edition. By Lawrence R. Wharton, Ph.B., M.D. Published by W. B. Saunders Company, Philadelphia. 1027 pages, 479 illustrations. Price $10.

Physicians Handbook. Fourth Edition. By John Warkentin, Ph.D., M.D., and Jack D. Lange, M.S., M.D. Published by University Medical Publishers, Chicago, Illinois.

Diseases of the Chest with Emphasis on X-ray Diagnosis. By Eli H. Rubin, M.D., F.A.C.P., F.C.C.P. Published by W. B. Saunders Company, Philadelphia. 685 pages, 355 illustrations, 24 plates in color. Price $12.

A Textbook of Medicine. Seventh Edition. Edited by Russell L. Cecil, A.B., M.D., Sc.D. Published by W. B. Saunders Company, Philadelphia. 1730 pages, 244 illustrations. Price $10.

Surgical Pathology. Sixth Edition. By William Boyd, M.D., M.R.C.P. Published by W. B. Saunders Company, Philadelphia. 858 pages, 530 illustrations, 22 color figures. Price $10.

Diseases of Metabolism. Edited by Garfield G. Duncan, M.D. Published by W. B. Saunders Company, Philadelphia. 1045 pages, 167 figures. Price $12.

History of the American Medical Association, A. By Morris Fishbein, M.D. Published by W. B. Saunders Company, Philadelphia. 1226 pages. Price $10.

Fundamentals of Clinical Neurology. By H. Houston Merritt, M.D., Fred A. Mettler, M.D., and Tracy Jackson Putnam, M.D. Published March, 1947, by the Blakiston Company, Philadelphia. 289 pages, 96 illustrations. Price $6.00.

Practical Physiological Chemistry, 12th Edition. By Philip B. Hawk, Ph.D., Bernard L. Oser, Ph.D., and William H. Summerson, Ph.D. Published February, 1947, by the Blakiston Company, Philadelphia. 1323 pages, 329 illustrations, 5 color plates. Price $10.00.

Management of Tuberculosis in General Hospitals. Published by American Hospital Association, Chicago, Illinois. Copyright 1946. 47 pages. Price, paper bound, 50 cents; cloth bound, $1.00.

Sexual Inadequacy of the Male. By Paul Popenoe, Sc.D. Published by the American Institute of Family Relations, Los Angeles, California. 41 pages. Price $1.00.

Investigations on Streptomycin

Investigations of disputed chemical points regarding the action of streptomycin have recently been completed by Dr. John H. Bailey and Dr. Chester J. Cavallito of the Sterling-Winthrop Research Institute, who report that even a reduced form of streptomycin, known as dihydrostreptomycin, kills germs. A study was made to find out the part the aldehyde group present in the streptomycin molecule played in inhibiting the growth of bacteria.

At first it was thought that this group was solely responsible for the germ-killing action, but last year several laboratories reported that the aldehyde group in streptomycin could be destroyed without greatly altering its bacteria slaying power. The recent studies revealed that destruction of the aldehyde group altered streptomycin into dihydrostreptomycin. Then bacteria convert dihydrostreptomycin back to streptomycin, and this form of the antibiotic is what actually kills bacteria.

"In other words," Dr. Bailey reported, "when live bacteria and dihydrostreptomycin are placed together where the bacteria can grow, they commit involuntary suicide. They do this by converting the apparently harmless reduced drug back to the powerful weapon it was."

ANNOUNCEMENTS

September 9-11—Refresher Course in Anesthesiology, University of Kansas Medical Center, Kansas City, Kansas. Sponsored by University of Kansas, Committee on Anesthesiology of Kansas Medical Society, Kansas State Board of Health.

September 28-October 4—Twelfth Assembly and Convocation, United States Chapter International College of Surgeons, Palmer House, Chicago.

November 3-8—Graduate Instructional Course in Allergy, Cincinati, Ohio. Sponsored by American College of Allergists under auspices of Medical College of University of Cincinnati.

CLASSIFIED ADVERTISEMENTS

CRUTCHES with tips, $2.25 pair postpaid. Braces made repaired, altered. Prompt service. BOSWORTH BRACE SHOP, 416 N. Water, Wichita, Kansas.

FOR SALE—Vertical fluoroscope, shockproof, excellent condition. Write the Journal 10-47.

The Neurological Hospital, 2625 The Paseo, Kansas City, Missouri. Operated by the Robinson Clinic, for the care and treatment of nervous and mental patients and associated conditions.

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CHANGING CONCEPTS IN MEDICINE AND THEIR EFFECT UPON MEDICAL EDUCATION*

Karl Menninger, M.D.**

Topeka, Kansas

Four years ago my brother was called upon to take over a major responsibility for the medical problems of 15 million American citizens in uniform. This experience gave him a new insight into the problems of health and illness. Then two years ago I myself was brought face to face with national medical problems in a way which has altered both my life and my thinking.

My brother and I were thus brought to realize the paramount importance of extending and improving medical education. We felt it important enough to justify me in giving up private practice in order to devote my entire time to a program which we believe will make for the improved health of the nation through the improvement of public and private medical practice.

The co-operation of the president of the Kansas Medical Society and other members of the Shawnee County Medical Society, that of the University of Kansas Medical School and other universities and technical schools, of numerous Kansas and Topeka organizations, the United States Public Health Service, the Menninger Foundation, and especially of the Veterans Administration made it possible to establish in Topeka an important unit in the most ambitious program for graduate medical education ever undertaken. This program evolved from the wisdom and vision of Dr. Paul Hawley of the Veterans Administration and the generosity of the people as exemplified by the Congress. It is now established in universities, clinics and medical schools throughout the United States. Time prevents a discussion here of all its aspects, so I shall concentrate on the Topeka program.

Winter Hospital was set up by the Veterans Administration as a teaching center on condition that the staff of the Menninger Clinic agree to direct the teaching and supervise the clinical program. It is not a psychiatric hospital, but a general hospital with residencies in medicine, surgery, pathology, ophthalmology, and psychiatry. We do not feel that psychiatry can be properly taught apart from these other medical branches, and vice versa. There is also undergraduate and graduate training in psychiatric nursing, psychology, and medical and social rehabilitation.

For the past year we have had about 90 residents; from the first of July on we shall have about 150. This includes medical, surgical and psychiatric residents, although the majority are psychiatric residents. There are more psychiatric residents in training here than in any other hospital in the world. These residents attend daily conferences, seminars, and didactic lectures—many of which are in the evenings—three or four hours a day. In addition to this they all carry a heavy clinical load under supervision. Thus far practically all of them have been veterans, although we may now accept non-veterans. Several foreign governments, especially Canada, have arranged to send a number of men to participate in the program at their expense.

These psychiatric residents will be here normally for three years; at the end of that time they will go out to positions all over the United States—indeed all over the world—both inside and outside the Veterans Administration. Although most of our men will not graduate this year, I already have on file many hundreds of requests for them.

This fact—that I have on my desk requests for ten times as many trained men as I can possibly train—is a clue to a problem of great importance to every physician in the Kansas Medical Society. Let me give you a few statistics to think about.

(1) The Veterans Administration is committed to the care of only about 13 per cent of the population; yet it has an enormous medical problem which

*Read at the annual meeting of the Kansas Medical Society, Topeka, Kansas, May 13-15, 1947.

**Manager, Winter Veterans Administration Hospital, Topeka, Kansas, and General Director, Department of Education, Menninger Foundation, Topeka, Kansas.

will continue to increase for the next 20 years. (The peak load will be reached between 1965 and 1975).

(2) At the present time we have about 92,000 hospitalized patients in VA hospitals. Of these 53 per cent are psychiatric.

(3) For these approximately 52,000 psychiatric patients, there are on duty today 426 psychiatrists—about one psychiatrist to each 122 hospitalized patients. There *should be* at least one doctor for every 38 hospital beds because about one-third of these beds are occupied by quick-turn-over patients who can be cured if promptly and adequately treated. Hence the Veterans Administration hospitals alone need about 1,400 (or almost 1,000 more) psychiatrists today.

(4) Civilian state hospitals all over the country are also greatly in need of more psychiatrists.

(5) In addition to these hospitalized patients, it should be remembered that there are more psychiatric patients outside the hospitals than inside, far more, and mental hygiene clinics, psychiatric clinics, and private practice must take care of this load.

At present for such purposes at least 10,000 psychiatrists are needed.

(6) Yet there are only 4,000 psychiatrists in the United States *for all purposes!*

(7) Take a look at Kansas; we have 1,500 physicians in this society. There are 33 members of the Kansas Psychiatric Society, which is a fair representation. We need at least 300 psychiatrists.

(8) During the three days that this convention meets in Topeka, a hundred additional psychiatric patients will apply to the Veterans Administration for hospitalization. There will have been some discharges, but the additional long-time patient load of the Veterans Administration is increasing now at the rate of nearly 8,000 a year! (This is to say nothing of all the medical and surgical and psychiatric cases that will come in and go out of our hospitals this year, and this is to say nothing of the civilian problems which are ten times as great!)

This is why we feel that in addition to doing everything possible for the sick and disabled veterans of today and the sick and disabled civilians of today, we must bend every effort to increasing the number of properly trained psychiatrists with which we are so shockingly undersupplied. But psychiatrists must have psychiatric nurses and psychologists and psychiatric social workers to help them, so these must be recruited and trained also.

Even that will not be enough. In view of the fact that all statistics indicate that half of all the patients seen by all the doctors in all the cities and towns and country are non-organic cases, cases more psychiatric than surgical, it is perfectly clear that *we are never going to have enough psychiatrists.* Every physician except those who specialize in some limited techniques is going to have to be his own psychiatrist to a very considerable extent. According to his interest, his conscientiousness, and his ability, he is going to do this well or he is going to do it poorly, but he is going to have to do it, and the time will come when for a doctor to blunder in the psychiatric management of a patient will be considered just as reprehensible as to blunder in the surgical management of a patient.

What do these facts and figures mean in regard to medical theory? How can we explain the fact that whereas once the psychiatric patient was considered the exception, the statistics show that the psychiatric patient is now the rule, and that the organic medical-surgical patient the exception? Are people changing or is our point of view changing?

I think it is both. The changes occurring in civilization seem to bring pressures of a type that evoke protests from the human organism in other forms than inflammation and fracture. This accounts for the situation only in part. Changes in civilization are based upon changes in our scientific conceptions and discoveries, and these in turn are influenced by the development of civilization. Neither physics nor chemistry, nor yet psychology, has remained the simple descriptive science it was when you and I went to college. And since medicine is based on physics, chemistry and psychology, the great advances in these disciplines have led to a change in our point of view. They have given us a new insight into *the phenomenon of interaction* in the human organism. Just as no one can say whether the disintegration of uranium and the explosion of an atomic bomb belong primarily to physics or to chemistry, so no one can say whether a case of vascular hypertension is predominately a physical or predominately a psychological phenomenon.

This new insight regarding interactionism has led to an almost unconscious revision of our notions of human biology in the direction of what is now usually called the *holistic concept of personality.* In plain English this means that we now relate illness to the patient's total personality, and view any particular illness as a derangement, not of the patient's body chemistry or body physics or psychology alone, but of all three. What we call disease is an exaggeration of the defensive measures of the personality against any disturbance of its total adjustment homeostasis. And just because the human organism is provided with a function called psychological, the awareness of the possibility of a disturbance, a threat of danger, can act as an actual disturbance and cause defense measures and so called disease process equal in severity to that from an actual injury.

Such a theory requires a radical change in the practical management of patients in many instances. There are numerous obstacles in the way of implementing this point of view.

Many a doctor has said to me, "I know that Mrs. Jones should have such and such treatment, but (a) I can't do it because I haven't time and I haven't the training, (b) she can't afford to go away from home, and even if she could, (c) there would be no one to take care of the children and get the meals for her farmer husband, and (d) I would have a hard time convincing her husband that she ought to have such treatment, and the neighbors would never be con-

vinced of anything except that I was a blundering fool." Who can blame a doctor for being overwhelmed by so many practical obstacles as this?

Nevertheless, our view point has already changed and is still changing. Most of us realize at least that the old style of medical education along the lines of specialized techniques was wrong since we were never given a very clear idea of disease as a process. We don't know for example whether hypertension is a disease or the reaction to a disease; we don't know whether alcohol addiction is a disease or an attempt to cure a disease. We don't know how best to treat either one.

We do know that every future medical student must be taught not only some of the practical procedures of surgery but also some of the practical procedures of psychiatry. There will never be enough full fledged psychiatrists in our lifetime. Every doctor here has to be a psychiatrist. If most of our patients are going to be psychiatric, we are all going to have to learn more psychiatry. I say "we" because in respect to the psychiatric handling of the patient in general practice, I too, as have all the other psychiatrists, have much to learn. At Winter Hospital we are now trying out this project. On our medical wards where we have over 400 patients and six excellent internists, we have not only medical residents but we have 17 psychiatric residents. Every medical case is being studied from the psychiatric point of view as well as the strictly physical and chemical. We have a co-operative joint approach.

But this is quite different from the problem facing the physician in a one-man practice. Our medical schools are realizing that they didn't teach us the answer. They haven't been teaching us what we have to know in order to practice the best medicine for all the people. They didn't teach us enough psychiatry.

I may seem to be advocating the disappearance of the psychiatrist. I do so because I conceive of psychiatry as belonging within the framework of medicine as a whole. Medical psychiatry and psychiatric medicine are one and indivisible and embody the essence of sound diagnostic and therapeutic practice.

CONGENITAL ABSENCE OF THE FIBULA

Clyde B. Trees, M.D.

Topeka Kansas

Of 6,068 children seen at the Scottish Rite Hospital for Crippled Children, Dallas, Texas, over a period of 19 years, there have been 12 cases of congenital absence of the fibula. This series of cases was investigated primarily in an effort to ascertain the end results. The youngest child examined was five months old and the eldest 13 years.

The deformity associated with congenital absence of the fibula was usually noticed by the parents shortly following birth. It consisted of anterior bowing of the tibia, dimpling of the skin, usually at the point of the greatest bowing of the tibia, and talipes valgus, frequently associated with equinus. Later shortening of the involved leg was apparent, and when the child was first seen by a physician, no external malleolus could be demonstrated. X-rays, of course, easily confirmed the diagnosis. Frequently, other congenital anomalies were found associated with congenital absence of the fibula, usually the absence of one or more toes, occasionally the absence of one or more fingers. Eight of the series of 12 cases had associated congenital anomalies.

Case No. 1 of the series was a male, first seen at five months of age, in 1937. The fibula was absent in the left leg, associated with absence of the left foot and anomalies of the right leg and both hands. He was admitted and a soft tissue protruberance of the stump of the left leg was removed by operation in order to fit the patient with a prosthesis. He was last seen in July, 1938, at one and a half years of age, walking quite well.

Case No. 2, seen in April, 1926, was a male, 12 months of age, having congenital absence of the fibula of the right leg. There was 5.2 centimeters of shortening; the knee could not be fully extended; there was dimpling of the skin over the bowed tibia, and extreme talipes valgus. The little toe of the right foot was missing. X-rays were taken at an age before the lower tibial epiphysis would normally appear. At eight years of age, in 1933, there was 12.7 centimeters shortening of the right leg, and at nine years of age, in July, 1934, amputation of the forefoot was advised, but the parents refused consent and the child was permanently discharged.

Case No. 3 was a male, 14 months old, seen in February of 1941. Deformity of the right leg was noticed at birth. Examination revealed three centimeters shortening of the right leg, dimpling of the skin over the tibia, anterior bowing of the tibia and talipes equino valgus. There was limited motion of the ankle joint. Besides absence of the fibula, there were only four metatarsal bones of the right foot. At 20 months of age, in August, 1941, there was 4.5 centimeters shortening of the involved leg, and at two years of age the child was measured for a molded leather brace of the foot and ankle, with an elevation. X-rays taken at 33 months of age were probably too early to show the lower tibial epiphysis.

Case No. 4 was particularly interesting. This girl was first seen, in 1926, at 18 months of age. She had an absence of the fibula on the right side and a very rudimentary fibula on the left associated with ab-

sence of the second, third, and fourth toes of both feet. There was dimpling of the skin over both tibias, anterior bowing of both tibias, marked talipes valgus, despite which the patient walked fairly well. Unsuccessful attempts were made to correct the talipes valgus by manipulation. At eight and one-half years of age, in May, 1933, both ankles were operated upon. X-rays of both tibial epiphyses showed abnormal development. On exploring the right foot, no calcaneo-astragalar joint was found. An osteotomy of the neck of the os calcis was performed, and a graft from the inner aspect of the tibia was removed to form an external malleolus. On the left foot, an osteotomy was performed through the body of the os calcis and also through the forefoot. A small rudimentary fibula was freed and fused into a groove on the side of the tibia to form an external malleolus. At 11½ years of age, in June, 1936, the left foot was beginning to show equinus deformity and at 13 years of age, in September, 1939, the left foot was fixed in 25° equinus and the right in 19°. Both legs measured 75 cm. There was bilateral hallux valgus. At 14 years of age, in September, 1940, the patient had numerous calluses on the bottom of her feet, but got relief with metatarsal supports. She was last seen at 16 years of age, in May, 1942. She walked fairly well but complained of pain in the left foot which was in 20° of equinus, and also complained of occasional pain in her knee.

Case No. 5, a girl, was first seen at two years of age, in September, 1930. There was dimpling of the skin over the left tibia, a small rudimentary fibula, talipes equino valgus, two centimeters shortening of the left leg but no bowing of the tibia. A brace was applied which permitted the child to walk satisfactorily. At six years of age, in September, 1934, the left foot was operated upon. X-rays showed no definite abnormality of the lower tibial epiphysis. This is the only case among the 12 with a normal appearing lower tibial epiphysis of the involved leg. A rudimentary fibula was found which did not contact the astragalus but was found on the posterior surface of the tibia. The fibula was moved forward and downward, the peroneal tendons backward behind the transplanted fibula. Following the operation, the patient wore a brace. At eight years of age, the patient walked with foot in equinus and valgus but had scarcely any limp. At this time, in 1936, "Ferguson drilling" of the lower end of the femur and upper and lower ends of the tibia was performed to stimulate growth. The right leg at that time measured 63.5 centimeters, the left leg 59.8 centimeters, leaving 3.7 centimeters shortening. At nine years of age, in August, 1937, the patient had 5.5 centimeters shortening, but was walking well with a skate on the left shoe. When the patient was 10 years old, in 1938, a pan epiphyseal arrest of the right knee was done. At that time there was six centimeters shortening of the left leg. When 11 years of age, in January, 1939, the shortening was four centimeters, at which time an osteotomy of the lower left tibia was done because of valgus deformity. The remnant of the fibula was reversed and placed against the lateral anterior surface of the tibia and projected down over the os calcis. Equinus could not be corrected at this time. At 13 years of age, in March, 1941, the patient was walking with her foot in equinus, the left pelvic crest tilted up and a slight "C" curve of the back. There were large calluses under the heads of the second and third metatarsals. The left leg was only 2.7 centimeters shorter than the right. In May of 1941, a Lambrinudi type of triple arthrodesis was performed. When last seen in the clinic at 14 years of age in July, 1942, the patient's right leg measured 89 centimeters from the anterior superior spine of the ilium to the sole of the foot, the left leg 82 centimeters, leaving seven centimeters of shortening. This increase in shortening was due in some measure to the triple arthrodesis. She walked very satisactorily with a four centimeter elevation of the heel and three centimeter elevation of the sole of the left shoe. The left ankle was in 30° equinus.

Case No. 6 was a male, first seen at five years of age, in August, 1939. He had worn a brace since three years of age. There was anterior bowing of the left tibia, dimpling of the skin over the tibia, talipes valgus with 30° equinus, and absence of the fibula. There was malformation of the lower tibial epiphysis. The right leg measured 52 centimeters, the left 43 centimeters, making nine centimeters shortening of the left leg. There was also shortening of the left femur. A brace was made for the pa-



Case No. 5. This shows x-ray film, anterior view, following osteotomy of the lower tibio to correct valgus deformity and tibiol groft used to form a loterol molleolus.

tient. At eight years of age, in February, 1942, there was 12 centimeters of shortening of the involved leg. Due to the valgus deformity of the left foot, the patient's brace rubbed the skin and consequently could not be worn. Therefore, the patient was admitted to the hospital and a triple arthrodesis was performed to bring the foot into marked equinus, so that a molded leather prosthesis could be used until the child was older and could have an amputation.

Case No. 7, a girl, was seen at nine years of age, in September, 1940. She had had deformity of the left leg since birth. There was talipes valgus, and 1.5 centimeters shortening of the left leg. No bowing of tibia or dimpling of skin was recorded. X-ray showed absence of the lower third of the left fibula except for the epiphysis and a small piece of the metaphysis, and definite malformation of the lower tibial epiphysis. The patient was fitted with a brace and at her last visit, at 11 years of age, in February, 1942, had marked valgus of the foot, but walked well even out of her brace. The right leg measured 61.2 centimeters and the left 60.5 centimeters. She was measured for a new brace and was to return later for a lower tibial osteotomy to correct the valgus deformity of the foot.

Case No. 8, a boy, was first examined in 1927 at nine years of age. There was marked anterior bowing of the left tibia, talipes valgus, 11.5 centimeters shortening of the left leg, and congenital absence of the fibula. Dimpling of the skin over the tibia was not present. The fourth and fifth toes of the right foot were absent. X-ray showed malformation of the lower tibial epiphysis. In December, 1927, the left Tendo Achilles and the peroneal muscles were divided by operation. In February, 1928, at 10 years of age, the left forefoot was amputated and one-half of the astragalus was fused between the os calcis and the tibia. Following this, the patient was fitted with an artificial limb.



Case No. 6. These x-ray plates show complete absence of the fibula and malformation of the lower tibial epiphysis.

Case No. 9, a girl, first seen in October, 1931, at 10 years of age, had had a crippled left leg since birth. At four and a half years of age, at another clinic, the leg had been operated upon and an osteotomy of the left tibia performed to correct anterior bowing. A graft removed from the tibia was used to form an external malleolus. Examination revealed congenital absence of the left fibula and 5.5 centimeter shortening of the left leg, measured from the anterior superior spine of the ilium to the medial malleolus. When measured to the sole of the foot, the actual shortening was 10 centimeters. There was 15° flexion contracture of the left knee, which, according to the history, was 70° at birth. There was marked talipes valgus, with 40° to 60° equinus. Dimpling of skin over the tibia was not mentioned and from the photograph the dimpling seen may have been the old operative scar. The second toe of the left foot was absent, and there was no motion of the subastragalar joint. X-rays showed mal-development of the lower tibial epiphysis. The patient walked with her weight on the great toe. In November, 1931, the left forefoot was amputated and the patient was last seen at 14 years of age, walking quite well with an artificial limb.

Case No. 10, a boy, was examined at 13 years of age, in March of 1925. There was anterior bowing of the left tibia, talipes valgus, 9.5 centimeters shortening, and congenital absence of the left fibula. Associated was congenital absence of the first toe. The patient was admitted to the hospital and the left lower leg was amputated through the middle third.

Case No. 11 was a girl first seen in April, 1924, at 13 years of age. The parents had noticed anterior bowing of the left lower leg and foot, absence of the second toe of the left foot, marked talipes equinus, and 12.5 centimeters shortening of the leg. There was dimpling of the skin over the tibia. X-ray showed complete absence of the left fibula, except for the lower third in which there were a few calcified areas, where the fibula should have been and also mal-development of the lower tibial epiphysis. The mother was told that the Achilles tendon should be lengthened and a shoe extension built. The mother refused to give operative consent and so the child was discharged.

Case No. 12 was first seen in July of 1941 at three years of age. At the child's birth the parents had noticed deformity of the left leg and foot. A cast was kept on the involved leg the first three weeks following birth. Examination revealed 35° talipes valgus, associated with equinus, dimpling of skin over the tibia, anterior bowing of the tibia and 5.9 centimeters shortening of the left leg. X-ray showed absence of the left fibula and a malformed

lower tibial epiphysis. The patient was fitted with an ankle brace and was last seen October, 1941, at which time he was walking fairly well.

In the series of cases reviewed, there were seven boys and five girls. Eight of the 12 had congenital absence of the fibula of the left leg, two absence of the fibula on the right side, and one child had involvement of both legs. The fact that the left leg was involved in nine cases out of 12 probably has no significance; it would be interesting to record, however, in a larger series.

The end result has in the majority of these cases been some type of amputation below the knee of the involved leg. This has been necessary because of the marked arrest of growth associated with congenital absence of the fibula. The talipes equino valgus could be corrected by operative procedure but there was no satisfactory method of correcting the marked shortening. A pan epiphyseal arrest of the good leg was found feasible in only one of 11 cases, namely, Case No. 5.

Nine of the 12 cases either had, should have had, or will eventually have amputation of the involved foot or leg. Two, Cases 8 and 9, had forefoot amputation; Case 10, amputation below the knee; Case 2, advised to have amputation; Cases 3, 6 and 12 probably will need amputation; Case 1, foot congenitally absent; and Case 11, with 12.5 centimeters shortening, probably should have had amputation.

Of the three remaining cases, one, Case No. 4, had involvement of both legs in which the shortening was equalized and amputation was neither necessary nor advisable. By a series of operations, the foot deformities were corrected and the patient had a fairly good end result.

Of the remaining two cases, Case No. 5 had a pan epiphyseal arrest of the normal leg and several operations to correct the deformity of the involved foot. She eventually had seven centimeters shortening which was adequately compensated by elevating the heel and sole of her shoe. Of the 12 cases she was the only one having a normal appearing lower tibial epiphysis despite which she developed a good bit of shortening. She also had a portion of the fibula present. There was no bowing of the tibia but dimpling of the skin was present, associated with congenital anomalies. Case No. 7 had only 1.5 centimeters shortening at nine years of age and so could not be listed as one eventually needing an amputation. Interestingly enough she had definite abnormality of the lower tibial epiphysis, as shown by x-ray, and yet developed very little shortening. Of all the cases she was one of four that had a portion of the fibula present and far more fibula than the other three, no other congenital anomalies, dimpling of the skin over tibia or bowing of tibia. Both case No. 11 and Case No. 4 had a small part of the fibula present, but also had marked shortening. Case No. 4 had both legs involved and one leg had a small portion of the fibula present, but both legs were the same length.

It may be inferred that if a child has congenital absence of a fibula, regardless of whether he has other congenital anomalies, dimpling of the skin over the tibia, bowing of the tibia, presence of a part of the fibula, or apparently normal lower tibial epiphysis, he may still have sufficient disturbance of growth and shortening of the involved leg to call for later amputation. However, the difficulty in prognosis probably lies in the inability to determine by x-ray the amount of epiphyseal disturbance present. Only one of the 12 cases had a normal appearing tibial epiphysis, and the shortening present in congenital absence of the fibula can probably be attributed in a large measure to mal-development of the lower tibial epiphysis.

In view of the two cases, No. 5 and No. 7, that had the best end results, it may safely be inferred that if a child has no other congenital anomalies, no bowing of the tibia, part of the fibula present and a fairly normal appearing lower tibial epiphysis, the chances of that child having a more nearly normal length leg are better.

CONCLUSION

1) Congenital absence of the fibula is relatively rare—one case out of every 500 crippled children seen at this hospital.

2) It is characterized by one or a group of the following abnormalities; anterior bowing of the tibia; dimpling of the skin, usually at the point of greatest bowing of the tibia; talipes equino valgus; shortening of the leg, and absence of the external malleolus.

3) It is frequently associated with other congenital anomalies of the extremities.

4) Congenital absence of the fibula occurred more frequently, in nine out of 12 cases, in the left leg.

5) About 75 per cent of the cases of congenital absence of the fibula eventually require amputation.

6) There was a normal appearing tibial epiphysis in only one of the 12 cases. Shortening probably is caused by mal-development of the lower tibial epiphysis.

7) Those cases having no bowing of the tibia, no associated congenital anomalies, and having part of the fibula present with a fairly normal appearing lower tibial epiphysis stand the best chance of avoiding serious shortening of the leg and of a consequence are more likely to avoid amputation.

Plans for the establishment of 100 additional affiliated heart associations in key cities throughout the United States were made by members of the National Advisory Committee of the American Heart Association at its meeting in New York City on March 13. Through this program the parent organization hopes to expand research in hypertension, coronary diseases and rheumatic fever, and to reduce the toll taken by the heart diseases. There are now 23 heart associations and heart committees in the United States, all affiliated with the American Heart Association.

CLINICAL MANIFESTATIONS OF CARCINOMA OF THE PANCREAS
REVIEW OF LITERATURE AND REVIEW OF 16 CASES*

Frank A. Rieke, M.D.
Kansas City, Kansas

The usual concept of the clinical syndrome evoked by carcinoma of the pancreas, and the accounts of this condition ordinarily given in text books of medicine and surgery, picture it as essentially one of intense progressive jaundice with rapid and extreme emaciation. This jaundice is most often painless although occasionally there may be some epigastric pain which is apt to be of the paroxysmal type. When a distended gall bladder can be palpated in addition to the aforementioned clinical findings in a patient during the middle age or late in life, then in accordance with the well known law formulated by Courvoisier the existence of carcinoma of the pancreas is almost certain. In review of the literature and cases at St. Margaret's hospital, this concept was found to be a rather terminal late picture. With the progressive advance in surgical technique, radical curative operations have been made possible in carcinoma of the pancreas, whether it be the head, body or tail, which have been diagnosed early before extensive metastases have taken place.

From January 1, 1932, until January 1, 1947, a diagnosis of carcinoma of the pancreas was made on 31 patients admitted to St. Margaret's hospital. Of these 31 diagnoses, 16 were proven by surgery or autopsy. It is these 16 cases that were proved by surgery or autopsy that will be referred to from time to time in this article.

Actually in the majority of cases, pain is the first and most prominent symptom [3 5 9 12 13 14]. Out of the 16 cases in this review, 12 of these patients had as the first chief complaint, abdominal pain. This abdominal pain was rather constant, and in 10 of these cases the pain was deep just above the umbilicus in the epigastric region and radiated to either side, however more often to the left upper quadrant and sometimes going through to the back. This pain is rather constant in character and in many cases was accentuated by meals. Several patients in this series compained so bitterly of the accentuation of pain with meals that they refused to eat except when absolutely necessary to keep going. Many of these patients refused anything except a liquid or soft diet. Ten of these patients also complained of the pain being more severe at night when the patient was lying down. There are two theories for the cause of this pain, the first being that pain is caused by invasion of the neoplasm into the nerves of the celiac plexus, the other that the neoplasm constricts the pancreatic ducts and thereby causes pain which is accentuated by meals. The onset of pain in this series of cases ranges from 3 to 14 months prior to admission to the hospital, the average being approximately six months. Other writers on this same subject give variations in the average time anywhere from four to eight months. As early as 1858 DeCosta collected a series of cases of carcinoma of the pancreas and stressed the frequency of abdominal pain as well as the characteristics of such pain as it occurred in parents with this disease. Many writers since then have repeatedly emphasized that abdominal pain is often the earliest complaint, and during the course of the disease following, the most common and most prominent symptom. Eusterman and Wilber [12] describe the following features typical of pain in their patients. "Epigastric pain which radiates through the back, dull and aching in character, moderately severe, constant progression, exaggeration at night and quite often accentuated by meals."

Along with the pain, 10 of these 12 patients that had complained of pain as their first symptom, also complained of marked bloating and eructation. This bloating was more marked immediately after meals and lasted for some time following the meals. For this reason many patients failed to see their doctor, thinking that they were merely having an indigestion.

Nine patients of this series complained of nausea which they thought was due possibly to the pain in their epigastrium and the marked bloating and eructation. It would then appear that nausea is also another common symptom of carcinoma of the pancreas. There was only one patient in this series who complained of vomiting, which would indicate that vomiting is not a prominent symptom.

Twelve patients of this series complained of anorexia. According to the history this anorexia was due, not to actual loss of appetite, but to the fact that the patients would refuse to eat because in many cases the pain was accentuated by meals, and also because of the bloating sensation they got after eating. The pain associated with meals was usually colicky in character, which, as mentioned before, is possibly due to the constriction of the pancreatic duct by the neoplasm.

A somewhat unexpected finding was the fact that constipation was a definite complaint in all but two of the patients. The constipation usually devoloped during the course of the disease; or, when there had been long standing constipation, it was definitely aggravated by the present disease. This finding corroborates the observations of other writers, notably Ranson,[5] Friedenwald and Cullen [3] and Kiefer [13].

A rapid loss of weight is also another outstanding characteristic in this syndrome. However, the loss of

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weight usually follows the onset of pain. According to many writers on this subject, the loss of weight in carcinoma of the pancreas is much greater than in carcinoma of any other organ. In only one case in this series studied was a loss of weight the first symptom noted. In 14 patients of this series there was a marked loss in weight. This loss in weight was very rapid and was associated with marked weakness. The loss of weight ranged anywhere from 10 to 75 pounds.

In the series of cases studied for this report, four of these patients complained of swelling of the lower extremities, especially when they were on their feet. This came on gradually and was relieved at night. However, later they got very little relief from this swelling at night. About this time they also complained of some distension of the abdomen and, on physical examination, this distension was found to be due to an ascites with a definite fluid wave. According to many writers, this is thought to be due to obstruction of the return of the blood flow to the heart from the abdomen and lower extremities by pressure of the neoplasm on the large veins.

Jaundice was complained of in seven of this series of cases. However, this was a very late symptom, and in this series was a terminal symptom. None of these patients complained of jaundice until from one to eight weeks prior to death. This is in marked contrast to the description of carcinoma of the pancreas which is usually found in text books of medicine and surgery, and the concepts that many men have at present.

The laboratory findings in this series of cases were inconclusive. In three cases laboratory findings show a definite diabetic sugar curve. These patients were treated for diabetes for approximately three months prior to their admission to this hospital. The chief complaint in one patient in this series was marked increase in appetite with increase in water intake, increase in bowel movement and passage of urine, along with pruritis vulvae. This patient had no pain whatsoever. She was treated for diabetes, however, and gradually went down hill until she passed away. The carcinoma of the pancreas in this case was found at autopsy. In one case in this series a blood amalyse test was run and the result was 13 units, which showed a definite elevation above normal for the test used.

X-ray has been of little value in the early diagnosis of carcinoma of the pancreas, mainly because the lesions do not show in x-ray until they are far advanced and cause some deformity in the greater curvature of the stomach, the duodenal bulb, or the curvature of the duodenum. In two of these patients studied, x-ray examination showed a mass outside the stomach causing an extrinsic deformity of the greater curvature. In the remainder of this series, x-ray was negative.

Because of the situation of the pancreas deep in the abdominal cavity, it is rather difficult to palpate any abnormality or growth until it is far advanced. For this reason physical examination is of very little aid in the diagnosis of pancreatic tumors except in far advanced cases. In one there was a tumor mass palpable, the mass being approximately 4 cm. in diameter just to the left of the midline midway between the umbilicus and the xiphoid process. In the other two the mass was approximately 3 cm. in diameter, was markedly nodular and hard. It was situated just to the right of the midline midway between the umbilicus and xiphoid process. By the time the mass is palpable the patient is usually in a terminal condition, or the mass has metastasized by direct extension so as to render the neoplasm inoperable.

As mentioned earlier, from the onset of the first symptom of disease the patient takes a rather rapid and steady course. In this series of cases the longest history was 14 months, the average approximately 6 months, from the time of the first symptoms until the death of the patient. One patient, however, did complain of epigastric pain for a period of 13 years. In x-ray the stomach revealed no gastric ulcers. However, at autopsy a gastric ulcer was reported in this case. Therefore it was thought the epigastric pain was probably due to a gastric ulcer rather than to malignancy of the pancreas of this long duration.

It is the erroneous opinion of many individuals that carcinoma of the pancreas is usually in the head and very rarely in the tail and body. In recent literature on this subject, it has been definitely proven that this statement is incorrect [6, 7, 8, 4, 5]. In this series of 16 cases 41 per cent was in the head of the pancreas, 24 per cent in the body, 30 per cent in the tail and 5 per cent in the head and body.

Carcinoma of the pancreas, the same as carcinoma in general, is found more in the advanced age group. The average age in this series was 63 years. The youngest individual was a female 36 years of age, and the oldest was a male 88 years of age. The average age in a collective series of articles was 56.8 years. According to literature, carcinoma of the pancreas characteristically affects men more frequently than women. This is the observation of all writers on this subject. In this series of cases four women were included with an incidence of 25 per cent.

Carcinoma of the pancreas is by no means a rare disease. Estimates as to the frequency of its occurrence have been variously made. On the basis of these, it may be stated that primary carcinoma causes one to two per cent of deaths due to malignant tumors. It is present in approximately 0.1 per cent of all patients admitted to large general hospitals and is observed in .3 to .75 per cent of all autopsies [14].

CONCLUSIONS

1. Carcinoma of the pancreas is a disease of fairly rapid progression (an average of six months from the onset of the symptoms) which occurs mostly in persons of the sixth and seventh decade, the average age being approximately 56.8 years. It affects men more frequently than women.

2. Pain is the outstanding chief complaint and occurs at some time during the course of the disease

more frequently than does any other symptom. Even in those cases in which the head of the pancreas is the dominant site involved, pain will be present quite often before jaundice appears. The pain has no constant features common to the large majority of cases but may be continuous and dull, paroxysmal or colicky. It is usually quite severe and frequently radiates to either upper quadrant or into the back or may be limited to the back. It is characteristically worse at night when the patient is lying down but is relieved slightly by sitting up and walking about.

3. Loss of weight is also a common symptom. The loss of weight is very rapid and severe. Weakness and nausea often accompany this loss of weight.

4. Constipation appears to be another rather common symptom in carcinoma of the pancreas.

5. It would appear that jaundice is also a symptom in carcinoma of the pancreas. However, in this series of cases it was a terminal symptom appearing one to eight weeks prior to the death of the patient. In some cases jaundice never develops.

6. X-ray examination is of very little help in early diagnosis of carcinoma of the pancreas.

7. If progress is to be made in this field, one must be cancer minded and continually keep in mind carcinoma of the pancreas, since it is not a rare disease among patients in the cancer age group. Radical curative surgery can be performed if the diagnosis is made early before extensive spread takes place. In patients who have negative X-ray findings in the gastro-intestinal tract and receive no relief from medications, an early exploratory laparotomy is indicated.

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CANCER OF THE LUNG

Cancer of the lung is found in between one and two per cent of all autopsies and accounts for as high as 10 per cent of all deaths due to malignant disease. The increasing incidence of carcinoma of the lung is probably more apparent than real and is undoubtedly related to improved diagnostic measures.

The disease is usually bronchogenic in origin, and cough, chest pain, sputum and hemoptyses are the commonest symptoms in that order, occurring in over 50 per cent of all cases. Wheeze and dyspnea are important symptoms but of less common occurrence. Bronchial obstruction gives rise to peripheral pulmonary suppuration and may lead to an erroneous diagnosis of pneumonia, empyema, lung abscess, etc.

Diagnostic measures include a careful history and physical examination, sputum examination, roentgenography, bronchoscopy, and pathological study of pleural effusions and biopsy specimens. It is important to keep in mind that a solitary and solid tumor of the lung visible by x-ray is more often primary carcinoma of the lung than all other lesions combined. In a significant number of cases, positive diagnosis is not made until thoracotomy is performed.

At present, less than a third of primary lung tumors are resectable when the diagnosis is made. Improved technical measures in surgery and anesthesia have lowered the operative mortality in pneumonectomy for lung tumors to less than five per cent in skilled hands. Further improvement in handling the disease must come by earlier diagnosis. This entails early suspicion and recognition of symptoms with liberal utilization of x-ray and laboratory facilities and of the services of men trained in bronchoscopic technique.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

DO YOU KNOW?

1. That the Kansas Medical Society is the oldest incorporated institution in the State of Kansas, chartered by Territorial Governor Medary in 1859.
2. There are fifteen hundred and sixty doctors who are members.
3. There are over two thousand M.D.'s practicing in Kansas. It is possible that some of those additional doctors should be encouraged to join.
4. Among the twenty-four constitutional committees which have been appointed, some have already had meetings and are at work.
5. The committee on Maternal and Child Welfare has outlined a constructive program of health education for women and girls designed to reduce maternal mortality and morbidity.
6. The Stormont Library Committee is interesting itself properly, in Kansas Medical History, as well as a better use of the library facilities.
7. The Stormont Medical Library is located in the State House in Topeka, Kansas. It is worthy of a visit from every physician in the State of Kansas.
8. Our next state meeting will occur in Wichita, Kansas, probably May 10-13, 1948. The chairmen of all of the necessary committees have already been appointed and are beginning to arrange for another fine meeting.
9. The Committee on the Control of Cancer has started a registry which, if all physicians will help to keep up to date, will produce more accurate statistics and be helpful in reducing the mortality of that pernicious disease.
10. Kansas Physicians Service has 34,421 people in Kansas protected against either part or all of the medical and surgical expense of the most catastrophic illnesses.
11. The committees on "Rural Health," "Study of Heart Disease," "Allied Groups," "Public Policy," "Medical Economics," "Child Welfare," "Anesthesiology," and perhaps others, are becoming active and have interesting and beneficial programs developing.
12. Kansas Medical Society is the finest organization in the State. It can be bigger and better only as each and every member shows an active interest in its welfare.

L. S. Nelson

President.

EDITORIALS

"A Patient of Mine"

One of the most frequent remarks one would hear in the shop talk of doctors is "a patient of mine" etc. They talk in the most possessive manner of said patient. They regard too often that this patient is personal property. Some doctors actually become perturbed when they see a previous patient admitted to a hospital on another doctor's service. They even go so far as to remark that Dr. So and So "stole" their patient.

Now, often one wonders how many doctors, and this statement is made for both young and old practitioners, have ever stopped to think how far their possessiveness goes when they make the remark, "Now my patient . . ."

The whole precept of the practice of medicine the American way, which we request and demand, is the free choice of physician. The patient chooses the doctor; the doctor does not choose the patient. Now, how does a patient choose a doctor? Really, there is very little science in the way a doctor obtains a patient. Perhaps the doctor is a personal friend. Perhaps the patient and the doctor belong to the same church, club or civic organization. Perhaps the doctor has successfully treated a friend or a relative. Perhaps the doctor's office is convenient or his office hours are convenient with the patient's leisure hours. Perhaps the patient has been to all of the other doctors in the community and is just making the rounds. Perhaps the patient is trying to check up on another doctor's diagnosis.

Don't flatter yourself because a patient consults you in your office or calls you to his home. Don't become too possessive of that patient. Remember, please, that that patient is yours just so long as you render him service that is satisfactory to him and at a price he is willing to pay. Remember, that patient has a perfect right, under the free choice of physician, which we feel is the right way to furnish medical care in America, to hire and fire a doctor at will. The patient can much more truthfully say, "my doctor" that the doctor can say "my patient."

In order to maintain that patient as your patient, it is necessary for you to render satisfactory service. You must play fair with that patient. Sometimes this is professional service for an acute illness or an accident. Sometimes it is soothing a troubled and confused mind because of a situational or environmental circumstance. To the patient, both are of equal importance.

Ofttimes a busy doctor sends a young doctor to make a call upon one of his patients. The young doctor renders a service. The patient is pleased with that service. When the patient has need for professional services for another illness, he may call this young physician again. Should the young doctor refuse to go? Under the precept of free choice of physician, the young doctor has every right to render that service. But under the code of professional ethics, the young physician would be wrong in rendering that service. Which is correct? It would seem to us that the patient's right for free choice of physician makes it entirely just for the young physician to make that call, and that the code of professional ethics in this instance is wrong.

One of the greatest physicians I have ever known was not very well versed in the practice of medicine. However, he realized his own limitations. He was a general practitioner. When the going became tough, he always and freely called for consultation. He was the coordinator of medical service. He rendered his patients a type of service which is becoming increasingly scarce in the present field of specialization. When this physician said "my patient," it was truly his patient. His patients held for him the highest regard, and they maintained this high regard because he was always square with them. He did not pretend to be a specialist. He did not pretend to have supernatural powers. But he had the willingness and the insight to call for help when help was needed. He never let his patients down.

And so, I repeat, a doctor's possession of a patient lasts only so long as he may render or continues to render a service to that patient. Otherwise, in exercising that which we in the practice of medicine all request, the free choice of physician, "my patient" will express his prerogative and call another physician.

Stormont Medical Library

The Stormont Medical Library gives a cordial invitation to those working in connection with the medical profession to visit the library and to make use of the facilities it has to offer. The library is now occupying its new quarters, consisting of three rooms on the third floor, south wing of the State House. They include a comfortable reading room in which the more recent medical books and current periodicals are easily accessible. A full time librarian is in charge.

Books and periodicals are permitted to circulate freely among members of the medical profession and there is no charge for the service except the transportation cost for material sent out of town. Telephone requests of any kind will receive prompt attention. The lending period is for one month with renewal privileges when necessary. If the

library is unable to supply a request from its own resources, satisfactory interlibrary loans can usually be arranged.

The librarian will be glad to prepare bibliographies on special subjects on request. The library has the second and third series of Index Medicus, a complete file of Quarterly Cumulative Index Medicus, the Index Catalogue of the Surgeon General's office to date and a number of other valuable tools which furnish excellent sources for bibliographical work as well as for reference.

All requests for loans from the library should be directed to the Stormont Medical Library, Capitol Building, Topeka, Kansas, or call 2-9455. If this number does not answer, a call to 4730 will get attention. The library hours are from 8:30 a.m. to 5:00 p.m. on week days and from 8:30 a.m. to 12:00 noon on Saturdays. The staff will welcome your requests whether by phone, by mail or through a personal visit.

The New W-M-D Bill Versus Taft's Proposal

Barnum is supposed to have said that "there is a new one born every minute." The legend is that he was speaking of suckers. Perhaps the old saying was right. There is a new Wagner-Murray-Dingell bill for socialized medicine in every new session of Congress, and there seems to be a new sucker every minute who will listen to that sort of siren song.

So the new one is now in the national legislative hopper. Senator Murray—perhaps leading the three in this respect—is a clever user of publicity and timing. The introduction, and the President's special message to Congress urging its passage, were timed nicely in an attempt to steal the publicity from the hearing just opened on S. 545, the so-called Taft Bill, with which medical organizations are in general agreement. In other words, anything to steal thunder from a really serious and honest endeavor to improve national health in a manner that free-enterprising-loving Americans can support, anything to throw discredit toward the existing profession of medicine, anything to advance the political ambitions of a socialistic clique at the expense (and we *do* mean expense) of the whole United States.

The Taft Bill is far from perfect. Its general aims and purposes have been endorsed by the A.M.A. and by most State Medical Societies. Constructive criticism, toward elimination of bad policies, toward clarification, toward practical application, are now being presented in the Washington hearings before the Senate Committee on Labor and Public Welfare. Fortunately, Senator Taft is chairman of the committee and can no doubt be depended upon to keep the hearings on the subject at hand. But Murray is also on the committee and may be depended upon to muddy the water if possible.

For the protection of his patients and himself, every physician should follow these hearings closely, through the newspapers and radio, the A.M.A. Journal, and through the bulletins now issuing frequently from the Washington offices of the A.M.A., the United Public Health League, the A.A.P.S., and others. Not every physician is on all those mailing lists, but every County Medical Society Secretary is. So get him to read them at county meetings.

And, whether we like it or not, every physician should force himself to realize a political fact: Some form of federal health legislation is inevitable. In some manner Uncle Sam is going to have his finger in the pie of medical practice, in private practice, if you please—not just in public health matters. The question is not "if." It is "how," "how much," and "when." The Washington hearings now in progress may set the pattern for years to come. Even though good prognosticators say no actual bill will be passed by the present session of Congress, the actions of the Senate Committee now meeting may lay out the eventual pattern — *Rocky Mountain Medical Journal, June,* 1947.

Board Certifies 250 Candidates

The American Board of Obstetrics and Gynecology, Inc., announces that 250 candidates were certified at its meeting in Pittsburgh, Pennsylvania, June 1-7, 1947. The next written examination for certification will be held in February, 1948, and applications are now being received and will be received until November 1, 1947. Application blanks may be secured from Dr. Paul Titus, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

Fellowships in Medicine

The American College of Physicians announces that a limited number of fellowships in medicine will be available from July 1, 1948, to June 30, 1949. These fellowships are designed to provide an opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in internal medicine. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the pursuit of his work. The stipend will be from $2,200 to $3,000. Applications, in duplicate, should be submitted to the American College of Physicians, 4200 Pine Street, Philadelphia 4, Pennsylvania, before November 1, 1947.

UNIVERSITY OF KANSAS MEDICAL CENTER

The University of Kansas Hospitals became the University of Kansas Medical Center, effective July 1, 1947, by action of the State Board of Regents.

* * *

The American College of Allergists has elected Dr. Noble P. Sherwood, chairman of the department of bacteriology at the University of Kansas School of Medicine, as a fellow in the organization in recognition of his research in the causes of immunity.

* * *

A course in Applied Basic Sciences was started July 1 at the Medical Center. Designed primarily for resident physicians in Veterans Administration hospitals, the course will be given from July to January annually.

* * *

Mr. Harold Ingham, for many years director of the extension division at the university, is now devoting his entire time to the promotion of the postgraduate medical study courses. With offices at the Medical Center, Mr. Ingham will work closely with Dr. Edward Hashinger, director of postgraduate training. Refresher courses have been scheduled as follows:

1947

Sept. 9-11—Anesthesiology
Oct. 20-23—Tuberculosis
Nov. 3-4—Fractures
Nov. 17-20—Obstetrics and Gynecology
Dec. 10-12—Physical Medicine

1948

Jan. 19-21—Radiology and Cancer
Feb. 16-19—Internal Medicine, Psychiatry, Dermatology
Mar. 15-17—Surgery
Apr. 12-15—Pediatrics and Public Health
Apr. 26-27—Hospital Administration
May 4-8—Eye, Ear, Nose and Throat
May 25-27—Nursing Education

* * *

Faculty Promotions

Dr. G. M. Tice has been advanced to professor of radiology from an associate professorship. Dr. Mahlon H. Delp and Dr. L. E. Wood, assistant professors of medicine, have been advanced to associate professorships.

Four associates have become assistant professors: Dr. J. V. Bell, medicine; Dr. F. I. Ridge, medicine; Dr. J. H. Danglade, medicine; Dr. Rex I. Dively, surgery.

Advanced to associates from instructorships were: Dr. Paul Frick, dermatology; Dr. David Robinson, plastic surgery; Dr. William P. Williamson, surgery; Dr. Thomas M. Johnson, surgery; Dr. Gretchen Guernsey, anesthesia. Dr. A. I. Stockwell was made an instructor in surgery.

Dr. Nelse F. Ockerblad, professor of clinical surgery and head of the department of urology, has reached the retirement age for department heads but will continue to teach as he has been doing since 1919 at the university. Dr. William L. Valk, promoted from associate professor to full professorship, succeeds Dr. Ockerblad as head of the department of urology.

POSTGRADUATE COURSES TO BE OFFERED IN SEPTEMBER

at the

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, KANSAS CITY

REFRESHER COURSE IN ANESTHESIOLOGY

(See July issue for list of guest instructors and faculty)

Topics to be Discussed

Chemistry of Anesthetic Drugs
Psysiology of Anesthesia
Inhalation Anesthetics—Ether; Vinethene; Chloroform; Ethyl Chloride
Pharmacology of Anesthetic Drugs
Inhalation Anesthetics— Nitrous Oxide; Cyclopropane; Ethylene
Selection of Anesthetics for the Surgical Patient
Pathological Lesions Following Anesthesia
Preanesthetic Medication
Evaluation of Cardiac Patients for Surgery
The Surgeon's Viewpoint of Anesthesia
Curare and Its Uses in Medicine and Surgery
Anesthesia for the Obstetrical Patient
The Intravenous Anesthetic Agents—Pentothal Sodium; Evipal Indications, Contraindications
Spinal and Caudal Anesthesia
Rectal Anesthetic Agents
Accidents of Anesthesia
Therapeutic and Regional Block Procedures
Prevention and Care of Postoperative Complication
Anesthesia Clinics will be conducted in the operating room at 8:00 o'clock the second and third mornings of the course.

CONTINUATION COURSE IN SURGICAL PATHOLOGY

(All-day sessions on Thursdays for a term of 12 weeks, starting September 25; no session on October 9)

Outline of Subjects

Sept. 25 Breast
Oct. 2 Uterus
Oct. 16 Female Genitalia; Ovaries, Tubes, External Genitalia
Oct. 23 Male Genito-Urinary Tract
Oct. 30 Kidney
Nov. 6 Gallbladder and Liver
Nov. 13 Gastro-Intestinal Tract
Nov. 20 Respiratory Tract
Dec. 4 Skin
Dec. 11 Thyroid
Jan. 8 Lymph Nodes
Jan. 15 Hematopoetic System and Bones

For detailed program announcements and other information on these courses, write:

University of Kansas Extension Division
Lawrence, Kansas

MEMBERS

Dr. P. F. Theis, formerly of Arkansas City, is now practicing in Wichita.

* * *

Dr. T. V. Oltman, a member of the staff of the Axtell clinic at Newton for the past two years, has resigned and is returning to China to resume medical missionary work interrupted six years ago by the Japanese. Dr. Oltman first went to China in 1930, and was medical missionary for the Reformed Church of America at the Amoy mission until he was captured by the Japanese during the war. After his release he returned to this country and entered the army medical corps, serving in China until the end of the war.

* * *

Dr. Orville S. Walters, McPherson, spent the month of July in specialized study of heart disease at Harvard medical school.

* * *

Dr. Jack D. Weaver, Wichita, has accepted an appointment as a resident at the Eye and Ear Infirmary, Chicago, for one year.

* * *

Dr. J. H. A. Peck, St. Francis, announces that Dr. Charles W. Wilson, who received his medical education at the University of Kansas, is now associated with him in practice. Dr. Wilson served in the Navy medical corps in the South Pacific during the war.

* * *

The Hertzler Clinic, Halstead, announces that Dr. W. R. Rupper of Provo, Utah, has joined the Hertzler staff to specialize in internal medicine.

* * *

Dr. E. J. Beckner, director of public health in Butler county during the past four years, has resigned that position to accept a similar post at Hillsboro, Illinois.

* * *

Dr. J. L. Lattimore announces that Dr. A. A. Fink is now associated with the Lattimore Laboratories in Topeka. Dr. Fink served three years in the Army and during the past year has been at St. Margaret's hospital, Kansas City.

* * *

Dr. Thomas G. Todd of Greenwood, Mississippi, is now practicing obstetrics and gynecology with the Arkansas City medical clinic, formerly known as the Weston clinic. Dr. Todd was graduated from the Harvard School of Medicine in 1935.

* * *

Dr. C. D. Shrader, who has been practicing in Kingman during the past year, has opened an office in Newton. Dr. C. T. McCoy, formerly with the county hospital at Wichita, will open an office in Kingman.

* * *

Dr. Samuel T. Thierstein, formerly of Lindsborg, was certified by the American Board of Obstetrics and Gynecology at its meeting in June. Although Dr. Thierstein is now with the Olney clinic at Lincoln, Nebraska, he retains his membership in the McPherson County Medical Society.

* * *

Dr. R. Y. Strohm, Fort Scott, has been appointed Bourbon county health officer.

Dr. Robert P. Knight, chief of staff at the Menninger foundation, Topeka, left August 1 for Stockbridge, Massachusetts, where he will serve as medical director of the Austen Riggs foundation.

* * *

Dr. Hugh M. Swaney, Goodland, has announced that he will move to Klamath Falls, Oregon, this month. His practice in Goodland will be taken over by Dr. David A. Lasley, formerly of Belton, Missouri.

COUNTY SOCIETIES

The quarterly meeting of the Central Kansas Medical Society was held in Russell June 26. During the afternoon the doctors heard scientific addresses by Dr. Galen Tice, radiologist at the University of Kansas Medical Center, and Dr. David W. Robinson, also of the Medical Center, who spoke on plastic surgery.

* * *

Members of the Crawford County Society entertained their wives and a number of guests at a dinner at the Hotel Besse, Pittsburg, June 26. A short business meeting was followed by a musical program.

* * *

Dr. G. R. Dean, who has been practicing for 53 years, was guest of honor at a dinner meeting of the McPherson County Society July 2 at McPherson. Dr. Dean spoke and told of experiences early in his practice.

Death Notices

LOUIS RICHARD HAAS, M.D.

Dr. Louis R. Haas, 44, died at his office in Pittsburg, June 30, after suffering a heart attack. A member of the Crawford County Medical Society, Dr. Haas was graduated from the Cornell school of medicine in 1929 and began practice in Kansas in 1939. He confined his practice to eye, ear, nose and throat work and was a diplomate of the American Board of Ophthalmology and a fellow of the American College of Surgeons and the International College of Surgeons.

* * *

NEWTON CLARK SPEER, M.D.

Dr. Newton C. Speer, 71, industrial surgeon in Kansas City, was killed in an automobile crash near Peculiar, Missouri, July 6. He had been practicing in the Armourdale district since 1922 and was a member of the Wyandotte County Society. He received his medical education at the Kansas City Medical College, graduating in 1900, and practiced for three years in Richmond and later was on the staff of the state hospital at Osawatomie before moving to Kansas City.

* * *

LELAND CREASON EDMONDS, M.D.

Dr. Leland C. Edmonds, 45, died July 9 at his home at Horton after suffering a cerebral hemorrhage. He was graduated from St. Louis University School of Medicine in 1926 and began practice in Kansas in 1927. He had been practicing in Horton since 1929 in association with his brother, Dr. G. M. Edmonds, and the two had operated the Horton hospital for a number of years.

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Advisory Laboratory Commission

Along with the premarital bill, before the 1947 legislature, was a bill which created an Advisory Laboratory Commission to the Kansas State Board of Health, also authorizing the Board of Health to register and approve laboratories doing serological examinations and to examine and approve persons performing serological tests in approved laboratories. This bill, together with the premarital bill, was passed by the legislature and became effective July 1, 1947.

The purpose of the bill, as passed by the legislature, was primarily to protect the citizens of the state from unscrupulous laboratory operators, or new laboratories rapidly developing in order to take advantage of the law requiring serological tests on all applicants for marriage licenses. The Advisory Laboratory Commission, created by this law, is as follows:

Dr. N. P. Sherwood, University of Kansas, Department of Bacteriology, Lawrence—one-year term.

Dr. Lee H. Leger, Clinical Pathologist, University of Kansas Medical School, Kansas City, Kansas—two-year term.

Professor V. D. Foltz, Kansas State College, Department of Bacteriology, Manhattan, Kansas—three-year term.

Two additional members at large, appointed by the governor are:

Dr. A. A. Fink, clinical pathologist, now located in Topeka—four-year term.

Mr. Martin Dupray, Hutchinson—four-year term.

The Advisory Laboratory Commission met for the first time July 1, 1947, in Topeka. Dr. Sherwood was elected chairman, and Mr. Dupray was elected to act as recorder for the commission. According to the law, Dr. Charles Hunter, director of the Division of Laboratories of the State Board of Health, is acting as ex officio secretary to the commission.

After much discussion and deliberation, it was recommended to the Kansas State Board of Health that the following laboratories, strategically located over the state, be given provisional approval for performing serological tests required by law.

Lattimore Laboratories, Topeka
Dupray Laboratory, Hutchinson
University of Kansas Medical Center, Kansas City
Sackett Laboratory, Kansas City
Wichita City Health Department, Wichita
Bethany Hospital, Kansas City
Wichita Clinical Laboratory, Wichita
Saint Francis Hospital, Wichita
Wichita Hospital, Wichita
Smith Clinic, Pittsburg
Lattimore Laboratories, El Dorado
Mt. Carmel Hospital, Pittsburg
Wesley Hospital, Wichita
Murray Hospital, Dodge City
Ellsworth Hospital, Ellsworth
Hadley Memorial Hospital, Hays
St. Anthony's Hospital, Hays
Saint Margaret's Hospital, Kansas City

This provisional list was prepared to meet the immediate emergency of providing approved laboratories for general use, available on the first day the premarital examination law was put into operation.

The duties of the Advisory Laboratory Commission are:

1. To formulate procedures and qualifications for the registering and approving of laboratories performing serological examinations.

2. To formulate procedures and methods of examination and approval of persons performing serology tests in approved laboratories.

3. To recommend to the State Board of Health the adoption of the procedures and qualifications for the registering and approving of laboratories and the procedures and methods of examination and approval of persons performing serology tests.

The State Board of Health is authorized and empowered to promulgate and enforce rules and regulations that are recommended by the Advisory Laboratory Commission.

The Advisory Laboratory Commission met again on July 27, and began active preparation of standards, rules and regulations, and procedures to carry out their responsibilities. The following laboratories were added to the provisional list of laboratories and recommended for approval by the Board of Health:

Providence Hospital, Kansas City
Boothroy Memorial Hospital, Goodland
Asbury Hospital, Salina

The Executive Committee of the Kansas State Board of Health, acting for the Board, approved the above list of laboratories.

The commission is eager to cooperate with all laboratories in the state that wish to perform serological tests in complying with the law. An evaluation study is being proposed, which will begin some time during the month of September, for all participating laboratories.

The law further provides that, from and after September 1, 1947, it shall be unlawful for any person, firm, corporation, city or county to perform serological tests in connection with premarital or prenatal tests unless the laboratory in which such tests are performed shall have been registered with, and approved by the State Board of Health and unless all persons employed therein who perform technical services shall have been approved by the State Board of Health.

Rural Medical Care

It is the opinion of the A.M.A. that medical schools of the United States should be asked to cooperate and join in the attempt to solve the rural health problem. There is no other instrument in organized medicine which can or should lend itself to such a service as easily and efficiently, but a definite program must be submitted to the schools to enhance rather than jeopardize the prime purpose to which they owe their existence.

An example which might well be followed has been set by Colorado University, which has established a residency in general practice following the usual rotating internship of one year. In the residency the graduate will study six months each in medicine, in pediatrics, in obstetrics and gynecology, and in surgery, with allied specialties included under the four main heads. After this training, it is expected that the doctor will be capable of caring for more than 90 per cent of the patients coming to him should he locate in a small town.

Standards for Residencies and Fellowships

The Council on Medical Education and Hospitals of the A.M.A. has adopted new standards for residencies and fellowships in the specialties, and will outline these standards in the proceedings of the House of Delegates to be published in the J.A.M.A. Reprints will also be distributed.



WHENEVER NUTRIENT INTAKE MUST BE AUGMENTED

The occasion frequently arises when the intake of all essential nutrients must be increased, as in general undernutrition, following recovery from infectious diseases and surgical trauma, and during periods of anorexia when food consumption is curtailed.

In the general management of these conditions, the dietary supplement made by mixing Ovaltine with milk can find wide applicability. Delicious in taste, it is enjoyed by all patients, young and old. Its low curd tension and easy digestibility impose no added gastrointestinal burden on the patient. This nutritious food drink supplies all the nutrients considered essential for a dietary supplement: biologically adequate protein, readily utilized carbohydrate, easily emulsified fat, B-complex and other vitamins including ascorbic acid, and essential minerals. The recommended three glassfuls daily virtually assures normal nutrient intake when taken in conjunction with even a fair or average diet.

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Ovaltine

Three servings daily of Ovaltine, each made of ½ oz. of Ovaltine and 8 oz. of whole milk,* provide:

CALORIES	669	VITAMIN A	3000 I.U.
PROTEIN	32.1 Gm.	VITAMIN B_1	1.16 mg.
FAT	31.5 Gm.	RIBOFLAVIN	2.00 mg.
CARBOHYDRATE	64.8 Gm.	NIACIN	6.8 mg.
CALCIUM	1.12 Gm.	VITAMIN C	30.0 mg.
PHOSPHORUS	0.94 Gm.	VITAMIN D	417 I.U.
IRON	12.0 mg.	COPPER	0.50 mg.

*Based an average reported values for milk.

Veterans Administration Expanding

The Veterans Administration medical program is expanding in Kansas as it is throughout the nation. There are two underlying reasons for the general growth. First is the physical fact that many hundreds of thousands of veterans returned from the armed services during the last two years with disabilities which require prompt hospital care. It is estimated that we now have approximately 20,000,000 veterans in this country, or four times the number following the first World War, and many of these veterans will require medical care and services authorized by law. The second reason for growth is the determination of General Omar N. Bradley, Administrator of Veterans Affairs, and Dr. Paul R. Hawley, Chief Medical Officer for the Veterans Administration, to give ex-service men and women who need it medical service second to none.

Dr. Hawley immediately after appointment instituted a program for increasing the quantity and improving the quality of Veterans Administration medical service to veterans. Before this expansion began, there were VA hospitals at Wadsworth and Wichita. To meet the growing need in this state, the Veterans Administration acquired and is now operating the Army's Winter General hospital at Topeka with 1,000 beds for neuropsychiatric patients and 400 beds for general medical and surgical cases. Wadsworth has 2,042 beds, of which 1,071 are used for general medical and surgical cases and 1,025 for domiciliary care. There are 256 beds in use at Wichita. In addition to the hospitals in operation the president and the Federal Board of Hospitalization have approved construction of a new 1,000-bed neuropsychiatric hospital at Topeka. That expansion, typical of the national scene, has necessitated a great increase in the medical staff. Within the past year the VA has increased the number of its full-time physicians from 2,300 to 5,000.

To assure quality in its increasing staff, the Veterans Administration has outlined a program which will be attractive to the highest caliber of medical personnel. Points in that program, as outlined by Dr. Charles H. Beasley, wartime chief surgeon of the Advance Section in the European Theater, and now branch medical director for the VA in the four states of Missouri, Oklahoma, Arkansas, and Kansas, include:

Affiliation with the leading medical schools of the area so that the staffs of veterans' hospitals may keep abreast of major developments in medical science.

Establishment of a continuing educational program for all full-time staff members, giving them the advantages of lectures by specialists among their own full-time personnel and from part-time consultants associated with the VA hospitals.

Use of the best and most modern diagnostic and therapeutic equipment in all divisions of VA hospitals and clinics, permitting research as well as the best possible medical care.

Nor has the VA overlooked the financial aspect in seeking more and better qualified doctors. Salaries for full-time VA physicians now range from $4,149.60 to $11,000 annually. Regular pay increases within grade are provided for all VA physicians, along with opportunities to advance to higher grades by improvement of qualifications.

Retirement provisions are similar to those of civil service, five per cent of salaries being used toward building a retirement income. Time served in the armed forces is credited toward retirement.

Schedules also have been worked out to assure doctors more regular hours of service in VA hospitals and clinics.

A search for physicians is continuing, Dr. Beasley said. He advised physicians interested in investigating the opportunities of the service to write any VA regional office or hospital, or to the four-state branch office No. 9 at 420 Locust Street, St. Louis, Missouri.

Parenamine Reaching Market

First limited supplies of parenamine six per cent, new casein hydrolysate for parenteral injection, are now reaching leading hospitals and retail drug stores, according to Dr. J. Mark Hiebert, vice president and general manager, Frederick Stearns and Company Division, Sterling Drug, Inc., where this latest product to advance amino therapy was developed. Production difficulties had prevented earlier delivery, and only limited demands can now be met.

It is being marketed in a liter container ready for instantaneous use in patients unable to take sufficient protein by mouth. Outstanding results have been obtained in hyperproteinemic cases, and many operations which have proved fatal because of the debilitated state of the patient can now be successfully performed. Clinical tests have demonstrated its usefulness in healing wounds, ulcers and burned tissues.

Parenamine six per cent is fortified by the addition of the sulfur-amino acids methionine and glycine. It supplies 60 gm. of amino acids, which provides an adequate amount of protein to assure positive nitrogen balance, and contains no enzymes, no nucleic acid degredation products, and no glucose.

College of Pathologists Organized

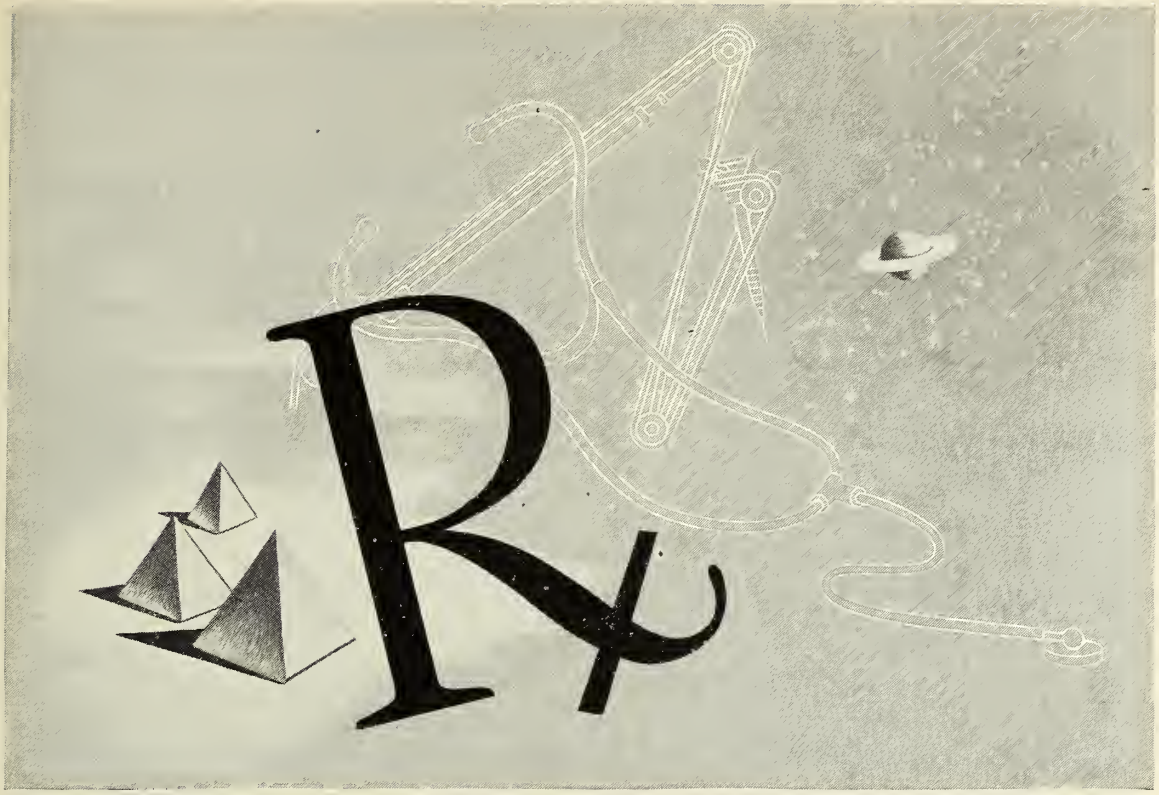
As a result of nine years planning by members of certain pathology societies throughout the nation, a College of American Pathologists has been organized. Plans for organization were outlined last summer during pathology meetings held at the time of the A.M.A. meeting in San Francisco, and a meeting was held in Chicago in December, at which more than 130 pathologists from this country and from Canada studied a proposed constitution and by-laws. Officers were elected, and the constitution and by-laws were revised to the satisfaction of all present.

Officers are: Dr. Frank W. Hartman, Detroit, president; Dr. Granville A. Bennett, Chicago, vice president; Dr. Tracy B. Mallory, Boston, secretary-treasurer.

Rheumatic Fever Library

The Colorado Rheumatic Fever Library has been established at the University of Colorado School of Medicine in response to the need for assembling in one place all that has been written on the subject. The project was made possible through the financial assistance of the Ladies Auxiliary of the Rocky Mountain Screen Club and the services of volunteer workers under the direction of the Denver Area Rheumatic Fever Diagnostic Service.

Plans call for obtaining copies or reprints of every article that has been written on rheumatic fever, with translations of those written in foreign languages. This material will be cross-indexed and assembled in bound volumes by years, and ultimately will be available to all workers in the field of rheumatic fever in the form of photostatic copies and abstract service.



The First Prescription...

The First Prescription was written in Egypt about 3700 B.C. Later, when the color of an herb was believed to indicate which planet it was under and for what disease it should be used, herbs were compounded with long prayers for their success to Jupiter, largest of the planets. Next, the prayers were condensed, written over the command "Recipe!" (Take!), and finally shortened to ℞ (R plus a vestige of the old sign of Jupiter).

The First Dental Prescription was Galen's, about 165 A.D.—a smooth paste for the cavity of an aching tooth (carrot, anise and parsley seeds, saffron, black pepper and opium).

Between those prescriptions—about 2030 B.C., in the Code of Hammurabi—broke the dawn of malpractice law. ("*If the doctor has caused a gentleman to die, one shall cut off his hands . . . if he has caused a slave's death, he shall render slave for slave.*")

The First Prescription Today, for most doctors, is the *complete protection* and the *confidential service* provided by a Medical Protective policy.

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Atomic Bomb Casualty Commission

A number of interesting facts relating to the Japanese who survived at Hiroshima and Nagasaki were disclosed in the report of the Atomic Bomb Casualty Commission released by the War Department at a recent press conference held in the Office of the Surgeon General.

The report carries no spectacular data or stories on freakism or physical anomalies among babies born to persons who were exposed to the bomb. It does not deal in the sensational. Based upon a study which was relatively short—about six weeks—the report gives a direct, unpretentious picture of work which is under way to evaluate the results upon human beings of a massive dosage of radiation, in combination with the heat and concussion generated by nuclear fission.

The commission was composed of two civilian physicians, two Army medical officers and one Navy medical officer. Their investigation was made possible through collaboration of the National Research Council, War Department, Navy Department, U. S. Public Health Service and the American Cancer Society.

Following are some highlights of the commission's report, which was reviewed and cleared by the Atomic Energy Commission prior to issuance.

"Members of the commission have been impressed during their observations of atomic bomb survivors by the fact that many of the burns have healed with accumulations of large amounts of elevated scar tissue, the so-called keloids. The striking feature noted is the large number of burns that have healed with excessive quantities of scar tissue, having a relatively flat surface elevated above that of surrounding skin. Margins of these lesions are sharply defined. The areas involved vary greatly, some being as small as one centimeter in diameter while others may involve most of the face or the back. The maximum growth of such tissue evidently was reached about eight to ten months following the injury . . .

"The commission's view that much valuable information can be obtained from a long-term study of atomic bomb casualties has been strengthened . . . From previous irradiation experiences with both animals and human beings, there is good reason to believe that reproductive disturbances, malignancies of one form or another, shortened life span, altered genetic pattern, etc., will in time appear in greater or lesser degrees.

"The problem is one of detecting the changes and recording the events as they occur. It is the view of the commission, furthermore, that with the possible exception of genetic recessives (physical monstrosities which might not crop out for several generations), the various changes can be successfully detected and recorded. This presupposes, of course, the proper cooperation with the Japanese and a reasonable expenditures of funds."

Reports of examinations made on 124 male inhabitants of Hiroshima in October and November, 1945, were provided the commission by a Japenese, Dr. Tsuzuki, who said that 43 of that number became "aboslutely sterile" after the bomb was dropped, 10 were "relatively sterile" and 71 were normal.

"It is already experimentally proved both in botany and zoology that there is a possibility of producing a malformation of descendants when the sexual cells are affected in some degree by radioactive energy," Dr. Tsuzuki told the commission. "The question, if this fact is applicable to the human being or not, will be made clear by further observations.

"We have already clear evidence that the human sexual cells are also affected by the atomic bomb injuries. There is a possibility of malformation of the descendants, if the sexual cells should be affected selectively, without any severe damage to the other organs or tissues . . . This problem must be, therefore, taken up and carefully followed further."

Conflicting figures have been presented on the number and character of casualties at Hiroshima and Nagasaki. Dr. Tsuzuki quotes the Hiroshima prefecture as estimating, 19 days after the explosion, the dead at 46,185; the missing at 17,429; the severely injured at 19,691; slightly injured, 44,979; other sufferers, 235,656. Six months after the catastrophe, the toll of dead and missing stood at 92,133, excluding the military dead. The total number of Hiroshima dead may be set at 100,000, according to the Japanese professor. The Nagasaki prefecture set that city's toll at 23,753 dead, 1,924 missing, 23,345 wounded and 89,025 other sufferers.

Dr. Tsuzuki compared the death rates of males and females at the two cities and found them almost equal outside a radius of 1.5 kilometers from the ground center. However, the death rate of females within a radius of one kilometer seemed lower than of males.

Standard Nomenclature Recommended

Standard nomenclature in medical records was recommended at the Institute for Medical Record Librarians, Dallas, December 2-6, under the sponsorship of the American Hospital Association and the American Association of Medical Record Librarians. A basic and elementary course in library work was conducted by leaders in the field during the meeting, to combat the shortage of trained medical record librarians.

Examinations for Civil Service Appointees

Private physicians who are members of the Reserve Corps of either the Army or the Navy may now qualify to give physical examinations to appointees to civil service positions, according to an announcement made recently by Dr. George C. Mayfield, regional medical officer of the Ninth Civil Service Region. The examinations will be conducted on a fee basis with each applicant making payment for his own examination. Complete information may be secured from the Director, Ninth U. S. Civil Service Region, New Federal Building, St. Louis 1, Missouri.

Predicts Scientific Renaissance

Medical science and its related industries today stand in the forefront of "an upward surge of activity" that represents perhaps the greatest scientific renaissance the world has ever known, in the opinion of Dr. Theodore G. Klumpp, president of the Winthrop Chemical Company, who spoke before the New York Academy of Medicine at its 100th anniversary observance.

In tracing the development of penicillin, new antimalarials and the atomic bomb, Dr. Klumpp paid tribute to the National Research Council, which served as a clearing house for information and made the results of investigations in one direction available to all other workers immediately. It functioned as a scientific library, which is truly the foundation for future developments, since the availability of scientific and technical facts from the 1,500,000 articles published each year in scientific periodicals will result in added discoveries.

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THE KANSAS PRESS LOOKS AT MEDICINE

Editor's Note. Material reprinted in this column reflects the editorial opinion of Kansas publications. Favorable as well as critical opinions will be selected to inform the membership on how the Kansas press regards the medical profession. Opinions expressed in this section are entirely those of the publication from which items are taken and are not necessarily those of the Editorial Board.

What Are We Going to Do About a Doctor?

A frequent question heard in LeRoy these days is, "What are we going to do about a doctor?"

The other day a fine LeRoy woman remarked: "There are so many people here that cannot afford to go to a hospital for every minor ailment." That is true. Perhaps the old-time "doctor books" will once more become popular reading. And it is possible that folks will grin and bear milder ailments which would have taken them to the doctor's office for a bunch of pills when the doctor was easily available.

The Reporter editor discussed the trend for specialization in medicine one day last week with a 25-year-old ex-GI who was with the 35th division in Europe during the late war. He plans to attend the University of Kansas and looks forward to six years of study in medicine. He now thinks that he will go into general practice but admits that if the present trend continues he may change his mind.

It is interesting to note that a large group of members of the American Medical Society, in convention last week at Atlantic City, banded themselves together "to make sure that medicine does not degenerate into a mass of specialists." Named the American Academy of General Practice, the group has 3,000 members to start with and is recruiting fast from the estimated 86,000 general practitioners in this country, comprising the rank and file of the A. M. A., and most of the doctors from the small towns as well as hosts of general practitioners from the cities.

One of the complaints of general practitioners has been that in recent years they have had a hard time getting their patients into hospitals where specialists have had the first say.

The field of general practice in the smaller communities offers much to give a conscientious physician a well rounded life. The financial returns are good. Surroundings for family life are more healthful than in the cities. The "country doctor" knows the patients intimately; he knows their background; he knows whether or not they are groaners and can keep them happy with mild doses of harmless medicines. If he has a high regard for his Oath of Hippocrates, to which all physicians subscribe, he also has the satisfaction of knowing that nowhere can he follow that oath so earnestly as he can in a small community.

But there is no gainsaying the trend toward specialization and, what is more worrisome to the small community, the trek of the country doctor to the large cities. The writer cannot understand it. But there are a lot of things he doesn't understand. — *Glick Fockele, LeRoy Reporter.*

Malnutrition Prevalent

More than one-third of the total population of North America suffers from malnutrition today despite advances made in the field of public health, Dr. Robert Goodhart, scientific director of the National Vitamin Foundation, reported recently at a meeting of the National Wholesale Druggists' Association.

"Of patients hospitalized for all reasons," he said, "two-thirds are afflicted with malnutrition, indicating that deficiency states exist in a land of plenty, among people who think they are well fed."

Records show, he said, that the most prevalent deficiencies, in order of incidence, are those of vitamin A, ascorbic acid, riboflavin, niacin, iron, vitamin D, calcium and thiamine. Deficiency states are predominantly mild, moderate or severe chronic forms, he explained, increasing in frequency and severity with lowered economic level.

Cancer Society Supports Refresher Course

A contribution of $3,000 has been made by the Kansas Division of the American Cancer Society to the refresher course in cancer and radiology offered at the University of Kansas School of Medicine on May 26, 27, and 28. The course was offered under the sponsorship of the University, the Kansas Medical Society, and the Kansas State Board of Health.

FCC Names Frequency for Diathermy

The Federal Communications Commission, by its action of December 26, made the frequency of 2450 megacycles available for immediate use of diathermy and industrial heating equipment, recognizing the public and commercial benefit which may be expected from harnessing electronics to medical, household and commercial use.

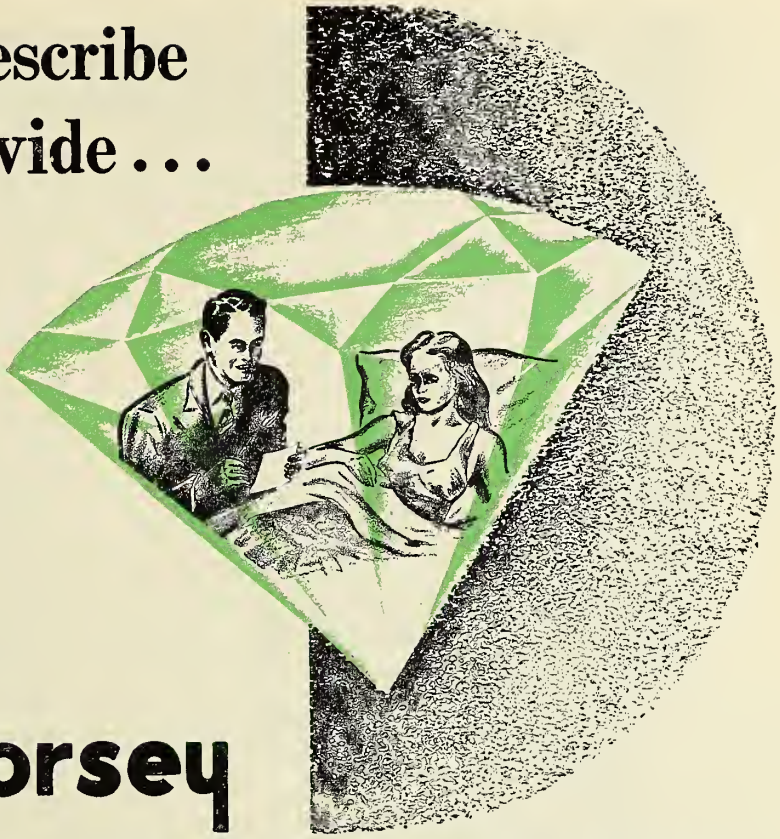
Electronic devices heat uniformly from the inside to the outside, which is just the reverse of ordinary heating apparatus. Its secret is in stimulating electro-magnetic impulses which are beamed upon the object. Heating is effected by dissipating the energy generated in the object being treated.

Some of this radiation naturally escapes, to invade the radio spectrum on corresponding frequencies, and the solution to this problem is to have electronic equipment designed so as to discharge excess radiations into appropriate frequency bands where they will not collide with communication transmissions on other ether paths. Under the new ruling, emissions from medical, scientific and industrial apparatus must be confined between 2400 and 2500 megacycles, subject to regulations which may be adopted in the future.

Hospitals Participate in Cancer Registry

The Division of Cancer Control of the Kansas State Board of Health announces that nine hospitals in Kansas are now participating in the cancer registry and follow-up service. Those submitting token registry reports and signed registry participation agreements before July 25 received payment for this service for the month of July. Hospitals now participating are as follows: University of Kansas Medical Center, Kansas City; St. Margaret's hospital, Kansas City; Bethany hospital, Kansas City; St. Francis hospital, Wichita; Mercy hospital, Parsons; St. Mary's hospital, Winfield; William Newton Memorial hospital, Winfield; Hatcher hospital, Wellington; St. Joseph hospital, Concordia.

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Conference on Cerebral Palsy

At the first conference of its kind, specialists working with children with cerebral palsy—"spastics"—met at the U. S. Children's Bureau, Federal Security Agency, March 26-28, to pool their experience preparatory to a major effort by the bureau and state crippled children's agencies to get help to these children. For the first time medical specialists in this field met with professional personnel from related fields involved in the care, education and training of this special group of children.

This contemplated expansion of services to children with cerebral palsy is in line with a general expansion of services to crippled children made possible through increased federal funds authorized last August under amendments to the Social Security Act.

The bureau estimates that there are 175,000 children with cerebral palsy in the country, and state agencies responsible for administration of programs approved by the Children's Bureau now have on their lists the names of more than 40,000 such children. At present there are relatively few centers in the country giving specialized care.

Major recommendations of the conference look toward a long-range program under federal-state auspices and are directed toward the following goals: (1) to find the children and get them under care as early as possible; (2) to provide the best medical care and treatment, and to train specialists in the field and at the same time spread a knowledge of cerebral palsy among all professional groups working with these children; (3) to bring these children to adult life as self-supporting or partially self-supporting individuals; (4) to develop each child's potentialities for the fullest possible enjoyment of life, through education and cultural advantages; (5) to educate parents of cerebral palsied children to a more understanding attitude.

New Research Laboratory

Construction of a new laboratory for the Sterling-Winthrop Research Institute, East Greenbush, N. Y., will start immediately as the result of an agreement between Sterling and the Mutual Life Insurance company of New York.

Under the agreement the life insurance company will purchase from Sterling a 21-acre tract of land and will finance construction of the laboratory. The development will be leased back to Sterling for a 30-year term, with the tenant having the privilege of renewing the lease for six successive terms of ten years each.

The new laboratory will extend research into penicillin-like compounds and derivatives, antibiotics, organometallic compounds, sulfa drugs, diagnostic agents, antimalarials, barbiturates, amino acids, streptomycin and other therapeutic preparations. Studies will be pushed in tropical medicine.

Army Microfilm Exhibit

Newest examples of microfilm duplication of the nation's greatest collection of medical literature were on display at the Fifth International Congress of Pediatrics meeting at the Hotel Waldorf Astoria, New York City, last month. The exhibit was sponsored by the Army Medical Library.

A treasure chest of medical information, going back in some cases to medieval times, the Army Medical Library in Washington now has a collection of more than 1,000,000 volumes that have been gathered, catalogued and indexed since 1836.

Through the microfilm service of the library, physicians, libraries and professional workers throughout the world may obtain facsimile replicas of this great bulk of medical literature on 35 millimeter film. Any page of a medical journal, book or manuscript is photographed with high-speed cameras in the microfilm process. The person requesting the material receives the film reproduction reduced to the size of a large postage stamp for each page. These pages can be read either in small-size film viewers which enlarge the tiny microfilm or they can be projected to large, readable size in special machines now available in many libraries and research centers. A whole book on microfilm takes only as much space as the corner of a coat pocket.

Costs for the service are moderate. Articles in medical periodicals are duplicated on microfilm for 50 cents each. Books are duplicated for 50 cents for each 50 pages or fraction thereof. Photostats are priced at 50 cents for each 10 pages or fraction thereof for any single volume.

Streptomycin in Tuberculosis

Results of treatment of tuberculosis with streptomycin in Veterans Administration and Army and Navy hospitals were reported at a conference sponsored by the National Research Council in St. Louis early in May. It was revealed that streptomycin is a much more toxic drug than had previously been supposed. The consensus of those attending the conference appeared to be that streptomycin should be used only in those cases in which other methods of treatment could not be expected to produce satisfactory results. It was agreed that a report summarizing the data presented should be prepared and submitted to the Journal of the A.M.A. as soon as possible.

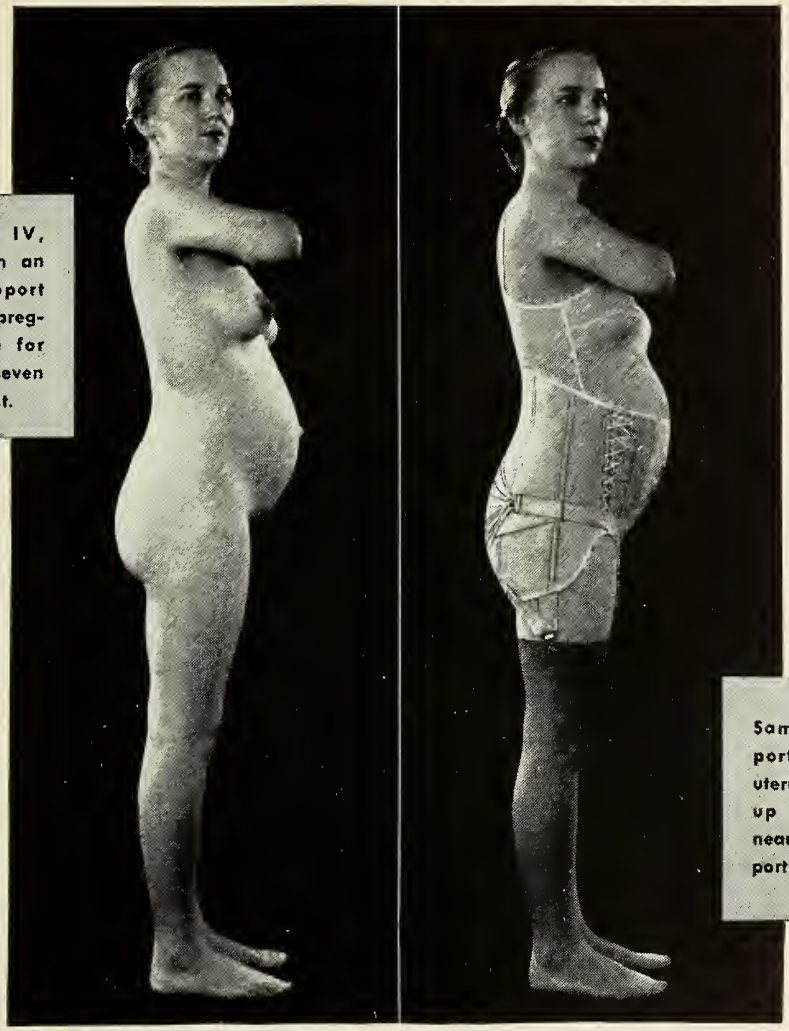
Public Health Service Cancer Research

With the passage by Congress of legislation more than tripling appropriations for research and control of cancer, and bringing next year's budget of the National Cancer Institute in Bethesda, Maryland, to the all-time high of $14,000,000, the U. S. Public Health Service announces plans for an expanded attack on the cancer problem that will place cancer in the forefront of the government's medical research and control programs.

Support may now be extended to universities to assist them in developing greatly expanded cancer research and training programs. The law also supports the acquisition of and the construction of buildings when urgently needed. Evidence of the desire on the part of the Congress to provide continuity in cancer research is shown in a provision of the appropriation act under which funds for cancer research and training grants remain available until spent.

A total of $594,348 has already been divided among 46 projects in 23 states, and the Institute is greatly expanding its own research program at Bethesda, where there will be increased emphasis on clinical research.

Four million dollars will go to cancer control, the program administered through the states to increase the effective use of present methods of diagnosing and treating cancer. It is estimated that while a fourth of cancer patients today are cured, another fourth could be cured if they received early treatment. Emphasis will be placed on the improvement of cancer detection, diagnostic and treatment facilities; the development of refresher courses for doctors; the establishment of adequate statistical services on cancer; and the setting up of cancer control units in state health departments.



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Fifty-six Prepayment Plans Approved

Fifty-six prepayment medical care plans have been granted the seal of acceptance of the Council on Medical Service of the A.M.A., according to recent announcement. The standards under which a plan is approved require that it must first have the approval of the state medical society or, if local, must have the approval of the local medical society in the area in which it operates. The members of the medical profession must assume responsibility for the medical services included in the benefits. The plan must have no regulation which restricts free choice of a qualified physician who is practicing in the locality covered by the plan and who is willing to give service under the conditions established. The method of giving the service must retain the personal, confidential relationship between the patient and the physician.

Mississippi Valley Society to Meet

The 12th annual meeting of the Mississippi Valley Medical Society will be held in the municipal auditorium at Burlington, Iowa, October 1-3. The entire program, to be presented by 25 clinical teachers from leading medical schools, is planned to appeal to general practitioners. Dr. Edward L. Bortz, president of the A.M.A., will be speaker at the annual banquet. No registration fee will be charged. Programs may be obtained from Dr. Harold Swanberg, 209 W.C.U. Building, Quincy, Illinois.

A meeting of the Mississippi Valley Medical Editors Association will be held the evening of October 1.

1948 A.M.A. Meeting in Chicago

Plans to hold the 1948 meeting of the A.M.A. in St. Louis have been cancelled because of inadequate hotel facilities in that city, and announcement has been made that the 1948 session will be held in Chicago in June. The meeting in Atlantic City this year was attended by 15,667 physicians, 41 lay executives of state and county medical societies, and 77 newspaper and magazine science writers, and few cities in the United States are able to accommodate a meeting of that size.

Promotion for Dr. Hiebert

Promotion of Dr. J. Mark Hiebert, vice president, to the executive management of Sterling Drug, Inc., assisting the president in the operation of the business, was announced recently by the company. Dr. Hiebert, who has been in charge of the Frederick Stearns and Company Division, Detroit, will move to Sterling's main office in New York.

Red Cross Blood Study

Scholarships for the study of blood and its derivatives have been offered to a selected group of professional candidates from foreign countries by the American Red Cross in cooperation with the League of Red Cross Societies. These candidates will be proposed by the national Red Cross societies and will be selected on a basis of personal and professional qualifications, as well as on the need in their country for information on the use of blood fractions. The scholarships will be for nine to 12 months of study in the United States and will have a value of $2,500 to $3,000.

The training will include study of methods of collecting and processing blood, processing plasma to the products of plasma fractionation, and the uses of blood and blood derivatives in medicine and public health. Field work will be done in such varied parts of the country as North Dakota for mobile field laboratory operation, Michigan for its state plan of plasma fractionation and Miami, Florida, for private blood bank maintenance.

"Golden Dozen" Discoveries

A "Golden Dozen" discoveries that are further advancing medical progress in the United States are listed by Dr. Theodore G. Klumpp, president, and Dr. Justus B. Rice, vice president of the Winthrop Chemical company, in a review appearing in Record of Chemical Progress.

Listed as the 12 "golden" medicinal advances of 1946 are: radioactive isotopes, by-products of the atomic pile; two antihistamine drugs, pyribenzamine and benadryl; streptomycin, the value of which was placed on a firm foundation in 1946; cytochrome C, an enzyme useful in such diverse disorders as angina pectoris, Raynaud's disease and barbiturate poisoning; rutin, a flavonol compound useful in diabetic retinitis; n-propyl, the metabolic agent; dengue fever vaccine; mumps vaccine; the antimalarial aralen; the progress made in synthesis of compounds closely similar to Vitamin A; the use of curare in anesthesia and in the treatment of conditions characterized by muscle spasm; and finally, advances made in cholera therapy.

Heart Association Elects Laymen

As part of a broad campaign to enlist public support in the nationwide fight against heart disease, prominent laymen were appointed and elected to serve on the governing bodies of the American Heart Association at its meeting in Atlantic City in June.

At a meeting of the board of directors, final approval was given a plan developed through the past year for the reorganization of the association, providing for both lay and medical representation throughout the governing bodies.

Dr. Arlie R. Barnes, chairman of the board of governors of the Mayo Clinic, was elected president at the Atlantic City meeting, and Dr. Tinsley R. Harrison of Dallas, Texas, was named president-elect. Among the laymen elected were Thomas I. Parkinson, president of the Equitable Life Assurance society; Clare Boothe Luce, former Congresswoman; Samuel Goldwyn, motion picture producer; Harold E. Stassen, former governor of Minnesota, and Robert L. Mehornay of Kansas City, Missouri.

National Heart Disease Institute

The board of directors of the American Heart Association, meeting in Atlantic City in June, unanimously approved a bill recently introduced in Congress to create a National Heart Disease Institute within the U. S. Public Health Service. Under provisions of the bill, funds will be made available for research and the development of more effective methods of prevention, diagnosis and treatment of diseases of the heart and circulation.

The program would be administered by a National Heart Disease Council consisting of the Surgeon General of the Army, the Surgeon General of the Navy, and 12 members widely experienced in scientific matters, six of whom are authorities in problems of heart disease. Included among the functions of the council would be review of applications for grants-in-aid to any public or other non-profit institution for projects related to diseases of the heart and circulation.

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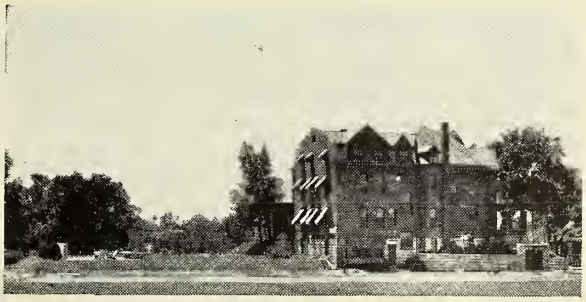
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Medical Society Dues

In response to many requests for information on state and county medical society dues, the Council on Medical Service of the American Medical Association recently conducted a survey to secure data. Of the 44 states reporting, twelve listed an increase in 1947 dues over those of 1946 and five mentioned an assessment in addition to the regular dues. The following table shows the distribution by states and amount:

Annual Dues	*Number of States*
$ 5.00	3
7.00	1
8.00	1
10.00	6
12.00	3
15.00	9
20.00	4
25.00	7
30.00	2
33.00	1
35.00	2
40.00	1
50.00	3
100.00	1

The schedule of county medical society dues is still incomplete and will be reported later.

New Principles in Sulfonamide Therapy

Three new principles in sulfonamide therapy are stressed in a scientific exhibit recently installed at the New York Academy of Medicine by the Schering Corporation. These factors are used in three different products to materially enhance the effectiveness of sulfonamides against infections.

Damage in the kidney from precipitation of sulfonamide crystals is avoided when combined sulfonamides are used. A saturated aqueous or urinary solution of one sulfonamide can be saturated still further with a different sulfonamide, each drug behaving as though it were present alone and exerting no effect on the solubility of the other. Thus the full sulfonamide effect is obtained with a greatly lessened danger of crystalluria. This greater safety is obtained by using equal parts of sulfadiazine and sulfathiazole with each drug present in exactly half the usual unit dosage.

The effectiveness of a new type sulfonamide in the prevention and treatment of eye infections is also shown.

The third new product is the sulfonamide effective against B. coli, featured by high solubility in the urine and rapid excretion into the urine in high concentration.

Chinese Students in U. S.

Forty-five of the 125 Chinese doctors, dentists, public health experts and nurses to whom fellowship awards will be made annually are now in this country engaged in studies at American universities in 14 states, it was announced recently at United Service to China headquarters. Seven additional fellows are now en route to the United States.

The fellowship awards were bestowed by the American Bureau for Medical Aid to China as part of a three-year program under which six national medical colleges in various parts of China will receive aid in elevating their standards of medical education to the level of the best institutions in the United States.

The recipients are given an opportunity to learn recently developed methods and techniques from which they were cut off during the war. On their return to China after a year's study they will join the faculties of the six national medical colleges selected to receive this assistance.

During the war years ABMAC provided quantities of medical supplies and helped train many technicians for Chinese medical services. It also introduced sulfathiazole, sulfanilimide and penicillin, and provided China's first supply of blood plasma, in addition to training a staff to operate that nation's first blood bank.

China now has only 13,000 qualified doctors for its 450 million population, and should have at least 266,000 if the Chinese people are to have anything approximating adequate medical care.

New Surgeon General of Army

Major General Raymond W. Bliss was named Surgeon General of the Army for a four-year term beginning June 1, 1947, according to a recent Army announcement. He is replacing Major General Norman T. Kirk, who has retired from active duty.

General Bliss was graduated from Tufts College, Medford, Massachusetts, in 1910 and was commissioned a first lieutenant in the Medical Reserve Corps in 1911. In 1913 he received his commission in the regular Army. Since that time he has been assigned to various posts in the United States and overseas, and during World War II he became Surgeon of the First Army and Eastern Defense Command. He was assigned as Chief of Operations in July, 1943 and Assistant Surgeon General in August, 1944. He is a fellow of the American College of Surgeons.

Brigadier General George E. Armstrong is now assuming the duties of Deputy Surgeon General, the post held by General Bliss since January, 1946.

ANNOUNCEMENTS

September 2-6—Twenty-fifth Annual Scientific and Clinical Session, American Congress of Physical Medicine, Hotel Radisson, Minneapolis, Minnesota. Open to all members of the medical profession in good standing with the A.M.A.

September 15-20—Second Annual Postgraduate Course in Diseases of the Chest, American College of Chest Physicians, Municipal Tuberculosis Sanitarium, Chicago, Illinois. Course limited to 30 physicians. Tuition fee, $50.

September 22-25—Forty-ninth Annual Convention, American Hospital Association, St. Louis, Missouri.

September 28-October 4—Twelfth Annual Assembly and Convocation, International College of Surgeons, United States Chapter, Chicago, Illinois. Meetings at the Palmer House and Hotel Stevens, operative clinics at Cook County Hospital.

October 1—Fourth Annual Meeting, Mississippi Valley Medical Editors Association, Hotel Burlington, Burlington, Iowa. No registration fee.

October 1-3—Twelfth Annual Meeting, Mississippi Valley Medical Society, Municipal Auditorium, Burlington, Iowa. Programs may be obtained from Harold Swanberg, M.D., 209 W.C.U. Bulding, Quincy, Illinois.

October 6-9—Silver Anniversary Conference, Kansas City Southwest Clinical Society, Kansas City, Missouri.

November 3-8—Graduate Instructional Course in Allergy, Cincinati, Ohio. Sponsored by American College of Allergists under auspices of Medical College of University of Cincinati.

April 19-23, 1948—Twenty-ninth annual session, American College of Physicians, Civic Auditorium, San Francisco, California.

May 6-8, 1948—Annual Meeting, American Association for the Study of Goiter, King Edward Hotel, Toronto, Canada.

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ABSTRACTS

Morbidity in Induction of Labor

Roblee, Am. J. Ob. and Gyn. 53:397, March 1947.

The author presents a series of 160 cases of labor induced at or near term. He shows that there can be severe morbidity incurred with the induction of labor. He shows that the procedure is in many instances poor surgery and generally is used too widely. His series demonstrates the marked increase in morbidity and mortality in labor which is induced. Induction of labor has obstetric usage mainly in the toxemia patient, including the diabetic. Induction of labor has little or no usage in post maturity problems or in management of contracted pelvis, or management of pelvic disproportion, and may be very dangerous after spontaneous rupture of the membranes.

Morbidity incurred by induction is greater than generally thought and this morbidity and increased mortality must be evaluated against any questionable advantage in such management.—*C. O. M., Jr.*

* * *

Cancer of Uterine Corpus

Corscaden and Gusberg, Am. J. Ob. and Gyn. 53:427, March 1947.

In a series of cases of cancer of the uterus the authors demonstrate that unmarried women, and, if married, childless women, who are overweight and in comfortable circumstances are most likely candidates for cancer of the corpus some time in their lives. The evidence presented suggests that women destined to have carcinoma of the corpus are measurably different than other women.—*C. O. M., Jr.*

* * *

The Management of Infectious Hepatitis

Capps, Richard B., and Barker, H. Herbert, Annals of Int. Med., March 1947.

On the basis of systematic study of 2,000 cases and observation of 600 more, the following points are emphasized:

1. Infectious hepatitis is a serious disease, with potentialities for residuals and complications, especially in poorly treated cases.
2. Three principles of treatment are emphasized:
   a. Bed rest, continued for a sufficiently long time.
   b. High protein, high carbohydrate, moderate fat diet: C 300 gms, P 200 gms, F 65 gms.
   c. Avoidance of additional liver trauma, especially operations, secondary infections, and various toxic substances, notably alcohol.
3. The patient should not be ambulatory until following criteria are satisfied:
   a. At least three weeks bed rest.
   b. Liver not enlarged or tender.
   c. Absence of such symptoms as lassitude, diarrhea, flatus, headache, anorexia.
   d. Normal serum bilirubin for one week, if slightly elevated direct Van den Bergh must be negative.
   e. Bromsulfalein under 10 per cent in one hour, and preferably under 5 per cent.—*E. J. R.*

* * *

EKG Studies in Rheumatic Carditis

Taran and Szilagyi, New York, in American Heart Journal, April 1947.

The authors report observations on EKG studies in rheumatic carditis. The report concerns "Q-T" or electrical systole. Prolongation of "Q-T" using Bazett's formula is taken as an indication of active carditis. (No studies were reported on the blood calcium and it is known hypocalcemia is the commonest cause of prolonged "Q-T".)—*P. W. M.*

* * *

Exchange Transfusion in Erythroblastosis Fetalis

Wiener, Wexler and Grundfast in Bulletin of the New York Academy of Medicine, April 1947.

Seventeen cases were treated—16 made prompt and lasting recovery. Half the donor's plasma is removed and replaced with saline to reduce the conglutinin content. Somewhat under 50 cc. more donor's blood is given than the amount withdrawn from the infant. To prevent conglutination heparin is given the infant during the exchange transfusion. Careful hematologic studies must precede such action. Between 400 and 500 cc. blood is exchanged. —*P.W.M.*

* * *

Bronchogenic Carcinoma

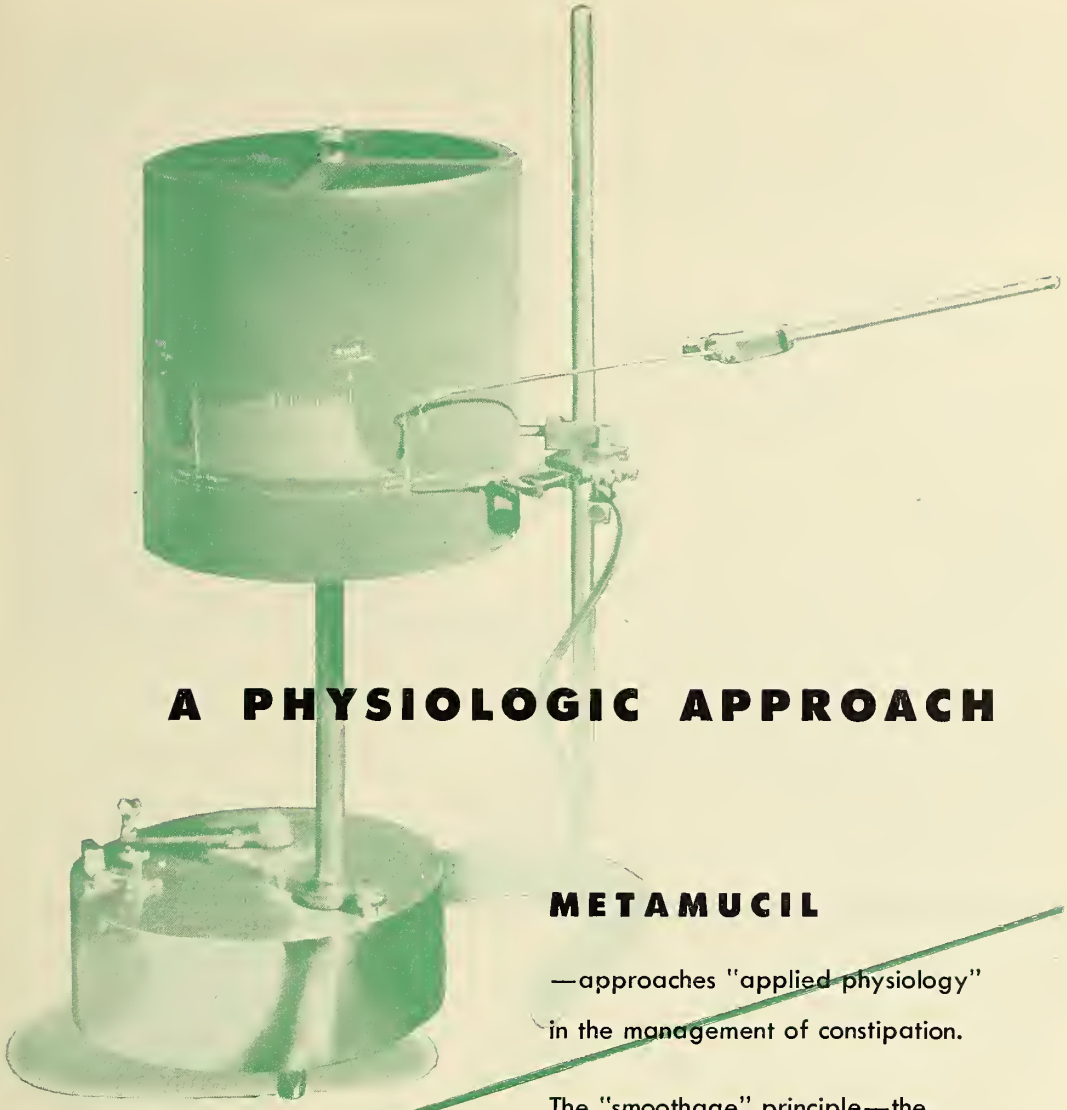
R. K. Hollingsworth, Washington, D. C., in Annals of Internal Medicine, March 1947.

R. K. Hollingsworth, MD, FACS, presented with free reference to other statistics from the literature an analysis of 343 cases of bronchogenic carcinoma studied at the University of Michigan Hospital, Ann Arbor. Two periods of delay may forfeit the patient's chance for cure by surgery which is his only chance. The first is between the onset of symptoms and medical consultation, and this delay averaged three or more months. The second delay is between the first medical consultation and a positive diagnosis. In over 50 per cent of the cases of bronchogenic carcinoma the diagnosis was not made for six months after the patient first saw his doctor.

There is relative and absolute increase in primary bronchogenic carcinoma. Sex incidence: Males 70 to 90 per cent. Age incidence 40-70, though some were seen under 20 and over 70. No occupational influence on incidence has been demonstrated. 59.2 per cent were of the right, 40.2 per cent of the left and 0.6 per cent involved both lungs. Growths are more frequently hilar but some are peripheral. Metastic sites in order of frequency: regional lymph nodes, one or both lungs, pleura, liver, brain, one or more bones. Spread indicated inoperability when to: pleura, supraclavicular nodes, recurrent laryngeal nerve, cerebral structures, bone, phrenic nerve, chest wall, contralateral lung, axillary nodes, liver and skin. Squamous cell carcinoma is most frequently seen and offers the best prognosis. Adenocarcinoma was found more frequently in women.

Most frequent initial symptoms: cough 41.9 per cent; pneumonia, "flu," "cold" 27.3 per cent; chest pain 20.7 per cent; hemoptysis 12.9 per cent; dyspnea nine per cent; easy fatigue 6.9 per cent. Less frequent initial symptoms: nausea and vomiting, abdominal pain; neurological symptoms, pains elsewhere in body; arthritic pain; clubbing of fingers and toes. Weight loss usually is a late manifestation.

In diagnosis, fluoroscopy and X-ray films in addition to the usual physical, looking for hilar or peripheral lesions, widened mediastinum, retraction, indicating atelectasis, free movement or fixation of the diaphragm. Bronchoscopy and biopsy is the most important procedure to prove the diagnosis. Pleural effusion does not mean pleural metastasis, but if bloody it probably does. "Since early resection is the only hope of cure, the slight risk of



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the thoracostomy is not to be compared with the hazard of waiting for a positive diagnosis which may only come in the form of a hopeless metastatic lesion." X-ray therapy is condemned except as palliation in inoperable cases. Operative mortality: 5 to 20 per cent and with any other therapy, 100 per cent mortality. Optimum time for operation: within six months of symptoms onset. Should be done as soon as tentative or actual diagnosis is made.—*P. W. M.*

Books Received

Advances in Internal Medicine, Volume II. Edited by William Dock and I. Snapper. Published by Interscience Publishers, Inc., New York City. 642 pages. Price $9.50.

Advances in Pediatrics, Volume II. Edited by S. Z. Levine, Allan M. Butler, L. Emmett Holt, Jr., and Ashley Weech. Published by Interscience Publishers, Inc., New York City. 410 pages. Price $6.75.

The Years After 50. By Wingate Johnson, M.D. Published by McGraw-Hill Book Company, New York City. 153 pages. Price $2.00.

Signs and Symptoms — Their Clinical Interpretation. Edited by Cyril Mitchell MacBride, M.D., F.A.C.P. Published by J. B. Lippincott Company, Philadelphia. 439 pages. Price $12.

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PLACENTAL BLOOD LOSS*

Lester D. Odell, M.D.
Chicago, Illinois

During 1944 and 1945 hemorrhage caused 30 per cent of the maternal deaths in the United States[1]. And, for the most part, these deaths were either preventable or had preventable factors. Probably many additional mothers died as a result of hemorrhage, since some patients are so weakened by blood loss that they succumb to puerperal infection. Thus Pastore[2] noticed that the incidence of puerperal infection increased 400 per cent if the hematocrit dropped below 30 per cent postpartum.

Beecham in 1939 reported 52 maternal deaths occurring over a six-year period in Philadelphia, of which 62 per cent were considered to be preventable[3]. He noticed that the usual story was not that of sharp, marked hemorrhage for a few minutes and then sudden death. Rather the picture brought to light by his study was one of steady, moderate bleeding over a period of several hours ending in shock and death because no one became alarmed early enough. There was an occasional case where bleeding was sudden and great in volume with the patient going into shock rapidly, but even in such a case there was usually time for adequate treatment. In fact, the average time between delivery and death was as long as five hours and twenty minutes.

So we should strive to perfect methods for conserving blood following delivery, and we must recognize the part played by the attending physician through defects in his technique in maternal death from hemorrhage.

Data from representative services indicate that the incidence of postpartum hemorrhage is somewhere between two and three per cent, and, even in these well-regulated institutions, death from postpartum hemorrhage, although rare, did occur. During the past 14 years we have had four deaths from postpartum hemorrhage. In almost every instance there were other complicating factors and the patients were not permitted to bleed to death without any attention. Nevertheless, the deaths in most instances had preventable factors.

This report is concerned with our studies on the late second and third stages of labor. The importance of a routine for the prevention and treatment of postpartum hemorrhage is stressed. And certain statistical and experimental data are presented to support our suggested methods.

HISTORICAL

Previous to 1918 obstetricians waited for the usual signs of placental separation as suggested by Ahlfeld. Often the time interval varied from 15 minutes to two hours or more in duration. Some clinicians still advocate such teachings although Warnekras and Wiebel, as early as 1918, illustrated by x-ray studies that the placenta separates within five minutes after the delivery of the baby. They could find little evidence of a retroplacental hematoma which was supposed to separate the placenta. Calkins, Davis, Leff, Stander, Greenhill, and numerous other investigators have reported that the placenta separates within one to seven minutes after the birth of the baby.

CAUSES OF ABNORMAL BLEEDING

According to accepted texts the causes of postpartum hemorrhage are: 1. Uterine atony, for which incomplete separation or retention of the placenta, overdistention (multiple pregnancy or polyhydramnios), anesthesia, prolonged labor and an inherent tendency to bleed are the usual ascribed causes. 2. Trauma, principally from Duehrssen's incisions or lacerations of vagina, cervix or uterus. 3. Abnormal placental site, such as placenta previa, abruptio placenta or placenta acreta. 4. Neoplasms of the uterus.

Davis reports 16 per cent of the cases of fatal postpartum hemorrhage are due to retained pla-

*Presented at the Annual Meeting, Kansas Medical Society, Topeka, Kansas, May 12-15, 1947.

cental tissue and 36 per cent are due to atony[4]. The latter group is an even more frequent cause in non-fatal cases and can, by and large, be prevented by a properly conducted second and third stage of labor.

Bleeding from the placental site is controlled by a combination of three factors: 1. by the contraction of the uterus which compresses uterine vessels; 2. by retraction, a shortening and thickening of uterine muscle which seems to ligate open vessels; 3. by the clotting mechanism. If there is no initial contraction, bleeding ensues. Similarly, if retraction fails, bleeding recurs each time a contraction ceases, for no uterus can remain in a state of constant contraction. And, finally, if the clotting mechanism dissolves, late or delayed bleeding will result from opened sinuses.

Up until the present study was initiated, the technique for management of the second and third stage was that suggested by Davis and Boynton[5]. These investigators were probably the first to suggest that proper management of the third stage actually commences during the late second stage of labor. In brief, their method was this: 0.2 milligrams of ergotrate was administered intravenously after delivery of the head or anterior shoulder, and 30 seconds were allowed to elapse before delivery of the infant. However, patients at this hospital still had postpartum hemorrhage, as evidenced by a 2.5 per cent incidence for 1944-46. It is true that we rarely packed uteri for hemorrhage since using oxytocics. But we had noticed a higher incidence of delayed hemorrhage, 5-20 days after delivery.

EXPERIMENTAL

To study the effect of oxytocics upon rate of placental detachment and amount of bleeding, numbered solutions of unknown content were given the resident staff for intravenous injection during later second and third stages of labor. These contained either normal saline, 0.2 milligrams of ergotrate, or one or two units of solution of posterior pituitary.

Our data, obtained from several hundred controlled experiments, indicates that the placenta can be expressed within nine minutes in almost all cases irrespective of time or substance injected. Slow delivery of the fetus seemed to be the factor which favored separation of the placenta. Obviously, the uterine wall requires some time to readjust itself to the decreasing size of the cavity as the baby is expelled. The placenta, however, must be expressed. If women were delivered from an upright or a squatting position, gravity would insure an early expulsion of the placenta. However, with a patient in a supine position, and anesthetized, external force becomes a necessary adjunct. Dieckmann and I[6] have measured the total time for delivery of the head to the complete expulsion of the baby as 5½ minutes in multiparous and 3¼ minutes in primiparous by the technique described.

Although separation and delivery of the placenta in anesthetized patients can be completed in over 95 per cent of cases within nine minutes with or without an oxytocic if the baby is delivered slowly, the blood loss after delivery of the placenta is definitely increased. It, therefore, becomes obvious that anesthetized patients must receive an oxytocic. Although the placental blood loss (slow delivery plus no oxytocic) compared favorably with a faster delivery plus oxytocic, the least uterine blood loss was encountered when intravenous pituitary and slow delivery were used concurrently.

Seski and I[7], using the acid hematin method, have measured episiotomy blood loss. The total loss of blood from episiotomy was found to vary widely, 76 to 740 ml. The rate of bleeding, however, was quite constant; about 50 ml. per minute before delivery of the head and 3.1 ml. per minute after delivery of the baby. The extreme difference in these rates is due to the tamponade from the infant passing slowly over the wound surface. The average blood loss, 253 ml., from episiotomy is high out of comparison with uterine loss. Our data indicates that most patients lose approximately 50 ml. with the placenta and 129 ml. after the placenta. Therefore episiotomies, in primigravidas, are the chief source of bleeding in uncomplicated cases. And the total loss for the average primipara approaches 500 ml. Blood loss subsequent to delivery is minimal. We obtained an average blood loss for the first 24 hours of only 52 ml.

TREATMENT

Our method[6] for conduct of the later second stage of labor is as follows: the baby should be delivered in stages with a 30 to 60 second pause after the delivery of each shoulder, requiring a total of at least three minutes. The placenta has usually separated within one minute. After the fetus is expelled the placenta should be compressed into the vagina and then extracted by pulling on the cord. An intravenous injection of one unit of solution of posterior pituitary or 0.2 or 0.4 mg. ergotrate may be injected intravenously after the posterior shoulder if the doctor is experienced; if not, then after delivery of the placenta. If bleeding occurs, express the placenta by Credé or explore and remove the placenta manually.

If the placenta is delivered intact and bleeding continues, we recommend the following: 1. Repeat the intravenous injection of ergotrate or pituitary. 2. Explore the uterus manually for an accessory lobe and to exclude rupture. 3. Massage. 4. If

bleeding continues, pack the uterus—but never pack twice. It is better to perform a hysterectomy if the preceding methods fail. 5. During and after hemorrhage give 1,000-2,000 cc saline hyperdermoclysis and transfuse the patient with whole blood, preferably with at least 1000 ml. Remember, intravenous plasma, serum and hypertonic glucose are only stopgaps; they should always be followed by whole blood.

Some obstetricians are overly cautious about exploring the uterus or manually removing the placenta in bleeding patients. This is a mistake, and the patient may pay with her life. In addition to learning to recognize the rare cases of adherent placenta, inversion of the uterus, rupture of uterus and uterine myomata, the doctor will often prevent a fatal postpartum hemorrhage if he learns this operation well. Our residents are instructed to perform manual removal of the placenta whenever the rate of bleeding becomes excessive or if the placenta becomes retained more than 20 minutes after delivery. During the past year we have advocated a large number of such operations as a teaching procedure, and there has been no significant increase in the maternal morbidity rate. In fact, for the months of January and February, 1947, 51 placentas were removed manually out of a total of 681 deliveries. This high incidence of course was dictated principally by our wish to teach. In a recent report Beecham[8] discovered that 12 out of a total of 168 women dying from hemorrhage in Philadelphia, expired with the placenta within the uterus, and nothing more than suprafundal pressure was used to control hemorrhage. Such neglect is encouraged by so-called conservative teachings concerning uterine invasion in bleeding patients.

The following case history, abstracted from one of our leading institutions, illustrates the dangers from too conservative an attitude toward manual removal of the placenta:

V. C., 25 years old, P_2G_4, was admitted in February, 1941, with the expected date of confinement February 6, 1941. There was a history of edema and headaches of two months' duration. Examination disclosed a blood pressure of 140/100 mm. Hg and a trace of albumin. Following premature artificial rupture of the membranes on February 6, a 26-hour labor terminated spontaneously with the birth of a 2,331 gram, living female infant. Following delivery the placenta failed to separate, and numerous attempts at Credé expression were made over a four-hour period together with repeated doses of oxytocics. The rate of bleeding, although never excessive at any time, was continuous. When the blood pressure had fallen to 70/30 Hg. and an unmeasured amount of blood had been lost, manual removal of the placenta was performed. Transfusions and other restorative measures failed, and the patient expired two hours after the operation (six hours after delivery).

In this case a fatal outcome could have been prevented by an early effective control of bleeding, including manual removal of the placenta.

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PRESENTATION OF FOURTEEN CASES SEEN AT SEDGWICK COUNTY TUMOR CLINIC

The Sedgwick County Tumor Clinic was established in April of 1937. Since that time a complete record of patients diagnosed and treated has been kept with meticulous care. The following cases were presented at the November 5, 1945, scientific program of the Sedgwick County Medical Society and represent a cross-section of the cases seen at the clinic. The 14 cases were presented by the specialists of the various services, who have assisted in the diagnosis and treatment.

The early diagnosis and treatment of cancer in all its phases is of prime importance to all members of this society. We feel that much personal benefit is derived from this clinic by our free discussion of these problems, by a cooperative evaluation of each case, by the correlation of our views and training, by the management of diagnostic and therapeutic problems that arise and by the eventual follow-up of these patients.

The cancer committee has tried in the selection of the 14 cases to stress the important diagnostic and treatment problems that are most frequently seen and discussed in the Sedgwick County Tumor Clinic.

You will notice at the bottom of each case report the reasons for presentation. Some are important diagnostic procedures; others are controversial treatment problems. We feel that the discussion of these

cases should bring out information valuable to all of us.

J. V. Van Cleve, M.D.
Moderator.

PRESENTATION OF SKIN CASES BY J. P. BERGER, M.D.

I believe these three cases fairly well cover the basic problems in the management of cutaneous carcinoma or epithelioma. The types: the squamous cell carcinoma, the basal cell carcinoma, and the baso-squamous cell carcinoma. The frequent precursor of these, a type of skin changed through age and exposure to sun and wind, is the so-termed "farmer's skin" or "sailor's skin."

The importance of the biopsy is well emphasized for correct diagnosis, on which is based the method of management. All three methods of accepted treatment are demonstrated: (1) surgery, (2) x-ray therapy, (3) radium therapy, or combinations thereof.

CASE NUMBER W.C. 1

White man, aged 73.

CLINICAL DIAGNOSIS: Squamous cell carcinoma.

HISTORY: Has had nodules upper and lower lips of approximately one and one-half years' duration. Has false teeth and has been a pipe smoker for a number of years, smoking at least two cans per week.

FIRST SEEN IN TUMOR CLINIC: November 5, 1938.

BIOPSY:

11-5-38—Biopsy upper lip. Pathological Diagnosis: Squamous cell carcinoma.

3-31-42—Biopsy left angle mouth. Pathological Diagnosis: Leukoplakia.

8-21-42—Biopsy right angle mouth. Pathological Diagnosis: Early squamous cell carcinoma in leukoplakia.

6-6-44—Fissure in right angle of mouth. Pathological Diagnosis: Leukoplakia. No evidence of malignancy.

10-10-44—Inner right cheek. Pathological Diagnosis: Leukoplakia (?) of buccal mucosa.

4-20-45—Inner right cheek. Pathological Diagnosis: Squamous cell carcinoma, Grade I.

TREATMENT:

11-28-38—X-ray Therapy. Right lower lip. 2,000 total R to field, 10 cm. distance, 100 KVP.

12-1-38—Right upper lip. 4,000 total R to field, 10 cm. distance, 100 KVP.

3-31-42—Surgery. Electrosurgical destruction of leukoplakic area in left angle mouth.

5-5-45—Radium Therapy. 5 radium needles inserted into and around lesion inner right cheek.

REASON FOR PRESENTING:

1. Importance of leukoplakia as a precancerous lesion.
2. Importance of biopsy.
3. The three methods of treating malignancies: (a) surgery, (b) x-ray (c) radium.

Case No. 1 demonstrates with clarity the importance of leukoplakia as a precancerosis. The all-important biopsy over a period of years has demonstrated leukoplakia, leukoplakia with early squamous cell malignant degeneration, squamous cell carcinoma, and a probable leukoplakia which some six months later on re-biopsy showed early carcinomatous change, all occurring in one patient. Here also is demonstrated electrosurgical destruction of pure leukoplakia, x-ray irradiation of accessible squamous cell carcinoma and radium needle implantation treatment of squamous cell carcinoma of the buccal mucous membrane inaccessible to the x-ray machine. From the beginning this case was managed as scientifically as possible—each and every lesion carefully biopsied and suitable therapy then administered, based on pathologic findings with most satisfactory results.

CASE NUMBER E.L. 2.

White man, aged 74.

DIAGNOSIS: Sailor skin. Basal cell carcinoma.

HISTORY: Has had ulcerative lesions on right forehead, front of right ear, left side of chin, below angle of left jaw for 6 or 7 years. Had some sores cured up with x-ray and radium treatments but did not continue with treatments.

FIRST SEEN IN TUMOR CLINIC: November 7, 1937.

BIOPSY:

4-22-38—Lesion from chin. Pathological Diagnosis: Basal cell carcinoma (adenocystic type).

TREATMENT:*

*The apparent discrepancy in the date of biopsy and the date of the beginning of treatment is due to the fact that the patient refused treatment at the time of the biopsy. The patient returned to us four years later with several additional lesions. At this time the patient was persuaded to accept treatment and the x-ray therapy was instituted.

9-26-42—X-ray Therapy. Total R to chin 1760. KVP 100, distance 10, size of field 3 x 3 cm.

9-26-42—X-ray Therapy. Total R to lesion under right eye 1760. KVP 100, distance 10 inches, size of field 2 x 2 cm.

10-3-42—X-ray Therapy. Total R to left mandible region 1760. KVP 100, distance 10 inches, size of field 2 x 2 cm.

10-10-42—X-ray Therapy. Total R to mid-forehead region 1760. KVP 100, distance 10 inches.

10-17-42—X-ray Therapy. Total R to right ear 1760. KVP 100, distance 10 inches.

3-6-43—X-ray Therapy. Total R to right ear 2,100. KVP 100, Distance 10 inches.

4-17-43—X-ray Therapy. Total R to field anterior right ear 1760. KVP 100, distance 10 inches.

REASON FOR PRESENTING:

1. Importance of actinic and wind factors in cutaneous carcinogenesis.
2. Methods of management.

Case No. 2 demonstrates again the importance of actinic and wind factors in the development of cutaneous malignancy, in addition to the anaplasia occurring in senile skin. I believe it wise to remember that cutaneous malignancy developing on a "sailor skin" basis presents a peculiar problem with respect to irradiation therapy. These epitheliomata are usually of slow growing malignant nature and respond readily to the various forms of therapy. However, these patients have new lesions from time to time because the skin has degenerated from actinic irradiation and as a result this skin does not

tolerate x-ray irradiation too well. Because of this circumstance, one not infrequently sees non-healing ulcers following x-ray or radium irradiation, which on repeated biopsy demonstrate no malignancy, rather, chronic inflammation and radio-changes. In this circumstance we feel some form of wide electrosurgical destruction to be most satisfactory.

The use of sun filters and protective garments is to be re-emphasized, for a recent survey in the mid-southwest has demonstrated approximately a 30 per cent incidence of primary cutaneous malignancy among all reported cancer.

CASE NUMBER E.J. 3.

White female, aged 84.

CLINICAL DIAGNOSIS: Epithelioma, ? gumma, old lupus vulgaris, ? Bowen's disease.

HISTORY: Patient has had an indolent sore on left shoulder for the past 15 years, resulting from a scratch. Heals at times and then breaks down again.

FIRST SEEN IN TUMOR CLINIC: April 2, 1937.

BIOPSY:

4-14-37—Biopsy left shoulder. Pathological Diagnosis: Basal-squamous cell carcinoma.

3-11-41—Biopsy left shoulder. Pathological Diagnosis: Chronic ulcer after radiation. No evidence of malignancy.

7-21-44—Biopsy and cauterization of scar. Pathological Diagnosis: Ulceration and infection of epidermis.

TREATMENT:

6-18-41—Major portion of scapula removed. Pathological Diagnosis: Hyaline fibrous tissue with chronic inflammation. No evidence of tumor tissue.

8-3-37 to 3-12-40—X-ray therapy. 34 treatments—5500 total R. KVP 80, 100 and 250, distance 30 cm. and 50 cm., filters ½ alum., ½ copper and 1 alum., 1 alum.

2-2-39—Radium Therapy. 90 mgm. hours radium to left scapula.

SEROLOGY: Negative.

REASON FOR PRESENTING: Differential clinical diagnosis. Value of the biopsy.

Case No. 3 is of particular interest from the standpoint of differential diagnosis. Four possibilities were entertained by the clinicians. A clear cut diagnosis and, thus, a rational approach to therapy, was reached only after biopsy.

A post-irradiation complication of a chronic, non-healing ulcer is noted. Again biopsy ruled out malignancy. Surgical intervention by the removal of the major portion of the scapula and devitalized tissue eventually produced the nice result we see today.

In summary, we have had demonstrated the necessity of biopsy for correct diagnosis, the only basis for a rational approach to treatment. We have likewise seen the end result of the accepted forms of treatment—x-ray, radium and surgery.

The results in my mind prove the value of the modern method, and demonstrate the frequent cooperation necessary between specialists in the management of a given case, and further illustrate that any method that will destroy malignant cells is, other things being equal, a satisfactory method, if every last cell is destroyed. Thus it is not so much what, but how we use the modality selected.

DISCUSSION BY A. F. ROSSITTO, M.D., FOLLOWING PRESENTATION OF CASES 1, 2 and 3

I have wondered whether many of the lesions we have been seeing in every day practice are being treated without first making a proper diagnosis. I personally have learned a great deal from one particular case that Doctor Berger has mentioned—that of the "sailor skin." This man was treated several times with x-ray and radium, only to discover that what we considered good judgment was wrong. These cases do break down and form ulcers and we have seen them almost miraculously healed by the suggested therapy.

PRESENTATION OF TUMOR IN RIGHT LUNG BY A. F. ROSSITTO, M.D.

Surgery is the accepted form of therapy on cases of this type. If diagnosed early enough this patient should have gone to surgery and should have had an examination with the idea of removing the lobe of the lung. We tried to get him here this evening, but he had a previous commitment.

CASE NUMBER C. R. 4.

White male, aged 66.

CLINICAL DIAGNOSIS: Malignant tumor mass in right lung.

HISTORY: Has had pain and stiffness in right arm and elbow for about a year. Also complains of pain in right hip and down leg, which is worse at night. Can't sleep on account of the pain. Is nervous and upset. Belching quite a bit. Has lost 20 pounds in the last year. Heart normal. Marked dullness right upper lung in front. Breath sounds are absent over this area. No palpable lymph glands. The liver is slightly enlarged. There is a palpable nodule in the epigastrium. There is a slight disturbance of the right arm, inner side of forearm. (Information from private physician's office.)

FIRST SEEN IN TUMOR CLINIC: May 18, 1945.

TREATMENT:

1-8-45 to 2-8-45—X-ray therapy. 29 treatments—total R 5550 to three fields—right infraclavicular, right cervical and right posterior chest. 400 KVP, distance 80 cm. 5 mm. copper.

6-6-45 to 6-28-45—X-ray therapy. 18 treatments—total R 5509 to four fields—anterior right chest, posterior right chest, right supraclavicular and right lateral chest. 200 KVP, distance 50 cm. 1 mm. copper.

REASON FOR PRESENTING: Typical patient with carcinoma of the lung.

This patient was sent to the clinic following a stay in one of the other hospitals. The diagnosis was a malignant tumor mass in the right upper lung. He had pain and stiffness in the right arm and elbow for about a year, and x-ray of the chest revealed tumor mass involving the right upper lung. He received 28 treatments, a total of 5550 R to the

right infraclavicular, right cervical and right posterior chest, using 400 KVP, distance 80 cm., and 5 mm. of copper. The symptoms disappeared only to recur after a short time, and he returned to us.

Because of the pain this man had we gave him additional x-ray therapy, and after 5550 R were given he was dismissed for a while, and then his symptoms again disappeared. Although we do not have a biopsy on this man we present this case because it is a typical carcinoma of the lung. The last treatment he had was in June, so we consider that x-ray therapy in this instance produced alleviation of the symptoms.

DISCUSSION BY A. L. ASHMORE, M.D., FOLLOWING PRESENTATION OF CASE No. 4

This type of case is extremely interesting to me because, unfortunately, it represents a type of case that we see too often. This case is definitely a case of carcinoma of the lung, which probably had already advanced to where it was inoperable. However, this patient has definitely presented symptoms over a period of time that should have caused a thorough check-up examination, which would have revealed the diagnosis at a time when this condition would have been operable.

Cancer of the lung is second only to cancer of the stomach in the male. There is only one treatment for cancer of the lung that is really successful and that is the complete removal of the affected area, usually total pneumonectomy. This type of surgery has been done successfully since 1933 and the mortality rate is high, but it is the only thing that really offers these patients a cure. Also we are finding that the mortality rate is being reduced very rapidly. Any case that has a chronic cough, especially one coughing up blood, pain in the chest, a mass visible in the x-ray, repeated attacks of pneumonitis, low grade pneumonia, atelectasis—any of these conditions should warrant a very thorough chest study. This should include a complete chest x-ray study, in any case, AP views, lateral views, oblique views. Bronchogram studies with a contrast media are essential, bronchoscopic study with biopsy sections from affected tissue is very highly diagnostic. However, there are a large number of these cases in which the diagnosis can only be made in the early stage of the disease by thoracotomy, which under proper conditions can be done as safely and with less morbidity than an exploratory laporatomy.

X-ray is definitely effective in a few select type cases which can be proven with biopsy examination and is definitely palliative and brings about relief of pain, but in the case of the true bronchogenic carcinoma the cases that do not have x-ray live just as long as the cases that have x-ray therapy. However, as evidenced in this case, it is possible to alleviate the symptoms and get considerable pain relief with x-ray therapy, and if the condition is hopeless otherwise I consider the patient should have the advantage of this therapy.

PRESENTATION OF TUMOR RIGHT THIGH BY L. K. CRUMPACKER, M.D.

If you are not already convinced that every tumor you remove should have a histological study, you would be, had you had the opportunity to examine this seemingly benign lesion before surgery, as we did.

CASE NUMBER C. J. 5.
White male, aged 64.
CLINICAL DIAGNOSIS: Lipoma—myxoma (?)
HISTORY: Six months before seen in Tumor Clinic noticed a small tumor mid-third anterior surface of right thigh. Grew rapidly for about the last month.
FIRST SEEN IN TUMOR CLINIC: February 22, 1944.
BIOPSY:
2-25-44—Tumor from right thigh. Pathological Diagnosis: Neurogenic sarcoma with myxomatous degeneration.
7-20-45—Biopsy small 1 x 1 cm. nodule 3 cm. lateral to scar on right thigh. Pathological Diagnosis: Subcutaneous neurosarcoma.
TREATMENT:
2-25-44—Surgery. Simple surgical excision.
NOTE: No further treatment was used in this case because this type of malignancy is radioresistant.
REASON FOR PRESENTING: Shows value of microscopic study of seemingly innocent tumor.

This is the case of a frail man, 64 years old, who came to us complaining of a tumor on the right thigh. Everyone who had ventured an opinion made a clinical diagnosis of lipoma or myxoma. Much to our surprise, after biopsy, we found it to be a neurogenic sarcoma.

PRESENTATION OF TUMORS OF THE BREAST BY L. K. CRUMPACKER, M.D.

The next three cases, Numbers 6, 7, and 8, are a series of breast cases which we picked out to demonstrate or illustrate the various phases of carcinoma of the breast. I would like to start with Case No. 7. We think this case has had excellent results to date. This woman had a malignancy of the breast which was removed. We removed all the glands in the axilla. She was not treated with x-ray and she is alive and well. We could not get this case here tonight, but we used it to illustrate the good results that we sometimes get with carcinoma of the breast.

CASE NUMBER E. H. 7.
White female, aged 56.
CLINICAL DIAGNOSIS: Carcinoma of right breast.
HISTORY: Five months previously noticed "caked" condition in upper part of right breast, without pain.
FIRST SEEN IN TUMOR CLINIC: August 9, 1941.

TREATMENT:
8-15-41—Radical mastectomy—major portion pectoralis major and minor removed. Tissue removed down to chest wall and axilla dissected. Pathological Diagnosis: Solid duct cell carcinoma of the breast (medullary type). No metastasis in lymph nodes.
REASON FOR PRESENTING:
1. Alive and well four years.
2. Operative result good.
3. Note amount of swelling of right arm and function of shoulder.

Some of my remarks may seem like repetition and not important, but those of us who see a good many breast cases are impressed about two things. The first is they are not followed, and the second is that many of these cases have poor function of the arms.

There are a number of ways that a man who does surgery of the breast can take care of these arms. But at least one way that works very satisfactorily is to start with the management of these arms the moment the patient returns from the operating room. The proper function of the arms is easier to regain and to maintain if you start immediately.

One method that works satisfactorily is to have the nurse prop the arm with pillows so it is at right angles to the body, have the hand elevated on pillows so that if a drop of water were put on the fingers it would run down the forearm. Maintain that position as long as the patient is in the hospital. On the third day you can dress the wound and start motion at the shoulder. It is important to impress on the patient the value of starting early exercise. By keeping the arm at right angle in bed, when they start to get up the weight of the arm pulls the arm down and you at least have 90 per cent motion started. As time goes on, you get them to get the hand back of the head and behind their lumbar region.

There is another thing you can do, starting on the fourth day. Have them walk to the wall and turn so their body is perpendicular to the wall and start walking up the wall with their fingers. Each day they try to reach a higher mark on the wall. By the time they leave the hospital they should regain about normal function of the arm.

There is one other problem you have in the management of these cases. That is a swelling of the arm. There is nothing more pathetic than to have a patient who has good results develop a swollen, functionless arm. You cannot predict which case is going to have a little swelling and which one a lot. I feel these people should be instructed that any work they do around the home that produces swelling of the arm should not be done—wringing clothes and sweeping are among the worst offenders. They should be instructed that if they get a little swelling they are going to get more swelling. In spite of the fact that you advise them not to do heavy work, some of them will have some swelling. These people will have to be instructed to sleep and sit with the arm elevated.

The return of function of these arms starts at the time of surgery. It is the surgeon's obligation to advise the patient how to prevent and control swelling. It is also important that these patients be instructed to return for check-ups. You say if patients have carcinoma of the breast and you have had them x-rayed and treated that you have fulfilled your obligation to them. I do not believe this is true. If you cannot cure them, then your obligation is to make them as comfortable as you can. During the first two years I think they should return at six-months intervals at least. Why? Because most of the local recurrences that are going to recur will recur in the first two years. Therefore, you will have an opportunity to see the local recurrences. After the first two years, once a year should be sufficient.

This patient did not have lymph gland involvement and was not given x-ray therapy. This procedure is in keeping with those authorities who feel that if the glands are not involved x-ray therapy is not indicated. It is my feeling that all the glands should be examined by a competent pathologist before this course is adopted. Until further evidence is presented, if the glands are involved, x-ray therapy is indicated. Pre-operative x-ray therapy delays surgical treatment and probably makes a good clean dissection more difficult or impossible.

CASE NUMBER S.G. 6.
White female, aged 67.
CLINICAL DIAGNOSIS: Carcinoma of breast with metastasis to axillary glands.
HISTORY: First noted red hard swelling around nipple of left breast about one year previously. Saw private physician and was told it was carcinoma. Patient refused operation. Left arm has been edematous for six months.
FIRST SEEN IN TUMOR CLINIC: September 13, 1941.
TREATMENT:
9-15-41—Left radical mastectomy. Pathological Diagnosis: Solid duct cell carcinoma with metastasis in the lymph nodes.
5-4-42—Right simple mastectomy. Pathological Diagnosis: Chronic cystic mastitis.
BIOPSY:
12-1-41—Biopsy scar tissue left side of chest. Pathological Diagnosis: No evidence of carcinoma. Benign ulcer.
10-5-45—Biopsy subcutaneous nodule left arm in cubital fossa. Pathological Diagnosis: Cutaneous neuro-fibroma (non-malignant structure).
9-26-41 to 10-18-41—X-ray therapy. 6300 Total R to four fields—left anterior tangential, left posterior tangential, left lateral axilla, left supraclavicular. 200 KV, 1 mm. copper and 1 alum. at 50 cm. distance.
9-9-43 to 9-22-43—Total R to four fields 3175—left anterior upper chest, left posterior upper chest, left

lateral upper chest, right lateral upper chest, all directed to left sternoclavicular joint. 200 KVP 1 mm. copper and 1 alum., 50 cm. distance.

REASONS FOR PRESENTING:

1. Note brassy cough (post radiation).
2. Carcinoma with metastasis to the axilla alive four plus years.

This case illustrates some of the problems that come up. This patient, as you will note, had a radical mastectomy. About eight months after the radical mastectomy she returned with a painful opposite breast. I suppose the physician who saw her suspected she had metastasis of the opposite breast. A simple mastectomy was done and pathological examination revealed chronic cystic mastitis. Certainly a biopsy must be made. What if it should have been malignant?

If you have a patient who develops a tumor in the opposite breast without other signs of recurrence, I think a radical mastectomy is the procedure of choice. Seven per cent of people who develop recurrences will develop a recurrence of carcinoma in the opposite breast. From time to time as people return for periodic check-ups it is your obligation to seek evidence of recurrence. Many local recurrences can be charged to the operating surgeon. I think Dr. Edgerton expressed it well when he said the work should be done by two surgeons who hate each other.

You should forget about closure of the skin—you should make surgery get the cancer. Some local recurrences will be single. If possible these should be excised and examined under the microscope. Some will be scar or fibrous tissue. Multiple nodules are best treated with x-ray.

When this patient returned two years after she was operated on she came in with enlargement of the left second costo-sternal junction. We took various types of x-rays in an attempt to prove there was a destructive bone lesion at this point but they were unsuccessful. In that particular location with x-ray it is very difficult to demonstrate a recurrence, and furthermore, it may not have been a bone involvement and may have been involvement of the cartilage. She is alive over four years, which is well worthwhile.

She has another post-complication which does not occur frequently. With all the x-ray treatments she developed a fibrosis of the lungs with a post-irradiation cough. In spite of everything you do the cough is difficult to control. We tried every conceivable mixture and finally were able to give her relief with saturated solution of potassium iodide.

CASE NUMBER M.B. 8.

White female, aged 66.

CLINICAL DIAGNOSIS: Carcinoma of left breast.

HISTORY: Has had lesion under left breast which started as a fissure. Duration about two years.

FIRST SEEN IN TUMOR CLINIC: January 9, 1945.

BIOPSY:

1-13-45—Biopsy from left breast. Pathological Diagnosis: Solid carcinoma (Sweat gland?).

2-7-45—Biopsy from left breast. Pathological Diagnosis: Scirrhous carcinoma of breast invading skin and muscle.

TREATMENT:

4-3-45 to 5-9-45—X-ray therapy. Total R to four fields 5814—left anterior chest, left anterior chest toward midline, left supraclavicular and left posterior axilla. 200 KVP, 1 mm. copper and 1 aluminum, 50 cm. distance.

REASON FOR PRESENTING:

1. Difficulty of diagnosis—sweat gland or carcinoma of the breast.
2. Results of palliative treatments.

If you looked at the picture on the wall you saw she had an ulcerated lesion in the sub-mammary fold, an ulcerated chronic hard lesion having the characteristic of cancer. We biopsied the lesion and sent it to Dr. Hellwig, who reported sweat gland carcinoma. Following this I took her to surgery and removed this lesion and I did a plastic procedure. I simply removed an eliptical shaped piece of breast and skin and subcutaneous tissue. I would have preferred to have done a radical, but when I had removed this there was cancer in the muscles between the ribs. She had diabetes; she is a poor operative risk and I elected to stop with that surgery. Surgery was followed by x-ray therapy. The results may be temporary.

The more you study sweat gland carcinoma, the more you are convinced that this case represents a very rare sweat gland cancer of the breast. One large group of men, headed by Dr. Pack, seems to think that many of the cancers that originate in the breast are sweat gland cancers. The breast is a sweat gland. On the other hand, there are other authorities who feel that this premise is not always correct. There are two types of sweat glands; the eccrine gland, which is a small gland in the skin; and the apocrine gland, which is a large gland found in the subcutaneous tissue. This particular lesion was in the sub-mammary fold region. We feel it fulfills all the criteria which we find necessary to make a diagnosis of sweat gland carcinoma. It is interesting that prognosis of this group of tumor is much better than in other carcinoma of the breast.

DISCUSSION BY E. S. EDGERTON, M.D., FOLLOWING PRESENTATION BY DR. CRUMPACKER

I would like to say first that I think we owe a vote of thanks to the Cancer Committee of the Cancer Clinic for the work they have done in presenting these cases here tonight.

This breast problem is a very vital one. These cases bring out a number of points—a whole world of points—in regard to breast cancer. As you re-

view these cases, one thing that is especially brought out is the importance of diagnosis. Now of course the crux of the whole cancer problem all the way through is the matter of early diagnosis. The thing we are concerned about is the type of lesion and the extent of the spread of that lesion—how far it has gone. If we can get it early enough we can feel sure of the cure of certain types of carcinoma.

What we are to look for in the management of these cases is important. The degree of malignancy and perhaps even more so, the extent of the lesions, are two factors we should give consideration to in our prognosis in these cases. The size of the lesion is of less importance. A higher grade malignancy without lymph gland involvement offers a better prognosis than a lower grade lesion with axillary lymph node involvement. Dr. Crumpacker referred to the extent of removal surgically of these lesions. He talks about recurrences. I think that we should think of these cases in this way—that these breasts, whether they are sweat glands or what not, are developed from the skin and they carry with them the lymphatic connections with the skin. The lymphatic vessels of the breast are intimately connected with the subcutaneous lymph glands of the breast. So, in a malignancy of the breast you have a close relationship to that skin and the skin should be removed widely.

The surgeon is responsible for local recurrences but is not responsible for distant recurrences or distant extensions. But when we talk about skin recurrences, they are not recurrences at all. They are cancer cells that we failed to remove at the time of operation. We should not think of them truly as recurrences, but as lesions that we failed to remove at the time of operation.

In the matter of diagnosis, it has come to us now that practically every lesion we see in the breast we advise be removed. These lesions are hard to differentiate with any degree of certainty. The minute they get a lump in the breast they come to us and want to know what it is. You cannot tell them. If, in every case, you write down on a piece of paper that this lesion is malignant or benign and you operate, your batting average won't be very good. The point I am trying to make is that you cannot tell what these lesions are until you take them out. Biopsy of the breast is very important.

Now comes surgery. It is a matter of complete surgery. Surgery gets a black eye sometimes because an operation has been performed on the breast that is not a complete operation. Down at the New York meeting of the American Medical Association several years ago Dr. Harrington from Mayo Clinic, whom Dr. Crumpacker worked with for several years, had an exhibit on breast lesions. A chap came to the booth and told him this: "I have been trying to do radical breasts, do them the way we were taught to do them, and I am getting in bad in my community. I do these radical breasts and my patients are in bed a week or so, have swollen arms and some with arms that are none too good. All my competitors are doing simple mastectomies and their patients are getting along fine. I get bad results and they get good."

Now that shows what is happening in certain localities where simple mastectomy is done. Of course they get good immediate results, but if you are going to do surgery in these cases, it must be an operation that is complete. X-ray should not be a thing that would excuse you from doing a radical operation. In other words, your operation must be complete, and if it were incomplete the following up with x-ray does not excuse that type of an operation.

DISCUSSION BY C. A. HELLWIG, M.D., FOLLOWING DR. CRUMPACKER'S PRESENTATION

I would like to say a few words about the diagnosis of breast tumors. The educational campaign of the American Cancer Society has been so successful that seldom during the last years do patients come to the physician so late that they present the text book picture of breast cancer. Of the patients who consult us only about one-third really have cancer, while two-thirds have benign lesions. An attempt to diagnose breast cancer so early by clinical examination is in our opinion not only extremely unreliable, but hazardous, because repeated palpation of a malignant tumor carries certain danger of propagating cancer cells.

All that can be expected from clinical examination in early cases is to diagnose the presence of a tumor. Whether this tumor is cystic or solid, benign or malignant, can rarely be ascertained by palpation through the intact skin. Every tumor of the breast should be removed regardless of the age of the patient. While it would be ideal to have a pathologist on hand during every operation, this, of course, is not always possible and, in the majority of cases, also unnecessary, if only the surgeon is familiar with the gross appearance of the most common breast lesions. Fibroadenoma, chronic cystic mastitis, and scirrhous carcinoma account for more than 80 per cent of all breast tumors and their outsurface is so characteristic that it is easy to recognize them on the operating table after removing the local mass and bisecting it. In the few instances where gross inspection of the fresh cut surface does not allow a definite diagnosis, the wound should be closed and the histologic report awaited before considering a radical mastectomy. A radical operation is never indicated on suspicion

of malignancy only. The fear that an interval of a few days between local removal of a malignant tumor and radical breast amputation carries any danger of metastasis is, in our opinion, unfounded.

PRESENTATION OF CARCINOMA OF THE FACE BY A. E. HIEBERT, M.D.

Dr. Berger has ably discussed carcinoma of the face in general. It is well recognized that the greater number of lesions on the upper part of the face are basal cell, whereas those involving areas below the mouth more frequently are squamous cell tumors. It was pointed out that frequently a lesion starting out as a basal cell type may change over to a squamous type. All of these lesions are curable if seen and adequately treated in time. Lesions of the face are conspicuous and logically should receive early attention. Strangely, however, many cases do not come to adequate treatment until late. This is illustrated by the following two cases. Cases 9 and 10 both involve the upper part of the face. The former was a basal cell tumor, whereas the latter, contrary to the rule, was a squamous cell lesion.

CASE NO. A.L. 9.

CLINICAL DIAGNOSIS: Epithelioma of inner canthus of right eye and of nose.

HISTORY: Sixteen years ago a small "mole" was said to have appeared on the inner canthus of the right eye. (Six years prior to this a red lesion was said to have been removed from the right infraorbital region by means of an electric needle.) When she first consulted a physician in 1929 there was said to have been a scabby lesion on the inner canthus of the right eye, measuring about 1 cm. in diameter. From June, 1929, to September, 1944, the lesion was said to have been intermittently treated by radium and x-ray. (The right eye was enucleated September, 1933.) (Information from private physician's office.)

FIRST SEEN IN TUMOR CLINIC: October 17, 1944. At this time there was an ulcerated area with irregular slightly raised edges involving the inner canthus of the right eye, the bridge of the nose and the upper eyelid. The right eye had been previously removed, the eyelids were contracted, and the skin of the surrounding area was dry and atrophic.

BIOPSY:

9-17-44—Biopsy from dorsum of nose. Pathological Diagnosis: Basal cell epithelioma.

11-25-44—Biopsy lower eyelid. Pathological Diagnosis: Basal cell epithelioma. As all the skin and ulcer moved freely over the deeper tissues, all of the involved areas were removed with wide margins, using shrap dissection. An immediate split skin graft was applied. This healed promptly and for the first time in 16 years the patient had no ulceration on the face.

1-16-45—Biopsy lower eyelid. Pathological Diagnosis: A small ulcer appeared on lower eyelid and biopsy revealed basal cell carcinoma.

TREATMENT:

1-31-45 to 2-3-45—X-ray therapy. 120 KVP, 20 mm., 30 dist. 1 cm. area to right orbit, 3 alum.

BIOPSY: 8-21-45—Biopsy lower eyelid. Pathological Diagnosis: Basal cell epithelioma. A radical cautery excision of the orbital region, extending through the dorsum of the right side of the nose, into the frontal sinus and the ethmoid sinus region was done. This has been followed by sequestration, but so far there is no evidence of local or diatal recurrence. As soon as the wound is completely clean and we can feel sure of no danger of recurrence, we shall do a reconstruction of the face.

REASON FOR PRESENTING: Persistent and thoroughly adequate treatment offer the only hope for permanent cure of chronic ulcerating epitheliomas of the face.

Case 9 illustrates a case that for a long time was inadequately treated. This, at first, also was true at our own hands. It seemed that we were able to remove all of the tumor by sharp dissection, which allowed us to do a primary skin graft. We did get an immediate healing. But our enthusiasm for quick results had led us astray, and before long there was a recurrence. We then did what Blair and Byars advise primarily, i.e., destroy the entire suspicious area with wide margins, using a hot cautery. This meant destruction of the right nasal bone, the invasion of both frontal and ethmoidal sinuses, and the destruction of part of both eyelids. It will mean further at least three months of sequestration and sloughing. But it will give us the opportunity to watch for further recurrence before we take a chance of covering up any "smoldering fire" that may remain. It will mean the use of a lined pedicle graft to close the defect. So far it looks as though we might have succeeded in destroying the entire lesion. If this case could have been radically treated before it was necessary to enter the nasal cavity much time and trouble would have been saved.

CASE NO. R.F. 10.

CLINICAL DIAGNOSIS: Carcinoma of face.

HISTORY: R. F., a patient of 63 years, was admitted complaining of a "cancer of the nose." He gave a history of having had a lesion on the face twelve years ago, which was said to have been treated by "cancer paste." Following this he had a great deal of ulceration, during the process of which he lost his right eye. He soon had a reccurrence of a mild ulceration of the nose. About one year ago this began to grow rapidly. The patient had given up all hope of living.

FIRST SEEN IN TUMOR CLINIC: April 28, 1945. On examination there was a fungating, rough, ulcerated, foul-smelling, draining tumor about the size of a lemon involving the greater part of the nose and the right maxillary region. The right frontal and orbital regions were covered with a dense scar, without semblance of eye or eyelids.

BIOPSY:

5-4-45—Pathological Diagnosis: Squamous carcinoma, Gr. II.

TREATMENT:

5-9-45—Wide cautery excision of tumor of nose and face, removing the greater part of the nose, the left turbinate, and the greater part of the right turbinate and septum, as well as the left maxillary sinus.

BIOPSY:

8-16-45—The soft tissues sloughed, the devitalized bones sequestrated, and the edges began to heal in. All looked well save for a small growth at the base of the left nasal ala remnant, one at the extreme root of the nose, a small lesion over the region of the left lachrymal duct and one raised lesion about 0.5 cm. in the left temporal region. Pathological Diagnosis: Squamous cell carcinoma, Gr. II, except that in the left temporal region, which showed squamous cell carcinoma, Gr. III.

TREATMENT: The areas about the nose were thoroughly cauterized, including the frontal sinuses and the ethmoids. The lesion in the left temporal region was widely excised and sutured. The lesion over the medial portion of the left lower eyelid was treated by Drs. Van Cleve and Berger, who used irradiation. The wounds are nearly clean now, and so far there is no evidence of recurrence of the lesion. As soon as it can be reasonably established that there will be no recurrence of the tumors, the matter of reconstruction can be taken up. In the meantime a prosthesis is being prepared.

REASON FOR PRESENTING THE CASE: This patient illustrated that even a "hopeless case" can sometimes be benefited and, we hope, cured by adequate measures.

Case 10 illustrates a well-advanced local lesion of the nose and face. There was a large, ulcerated, foul smelling lesion of the face which literally made a social outcast of this patient. He had given up and was resigned to die when Case No. 9 figuratively dragged him into the Tumor Clinic. Here we did a very radical cautery excision, removing practically the entire nose, all of the left turbinates, the left maxillary sinus, with a good part of the septum and right turbinates. Here again we find that we were not radical enough and here and there small recurrences appeared. These were widely excised, reaching into frontal and ethmoidal sinuses. A small grade III lesion appeared independently on the left lower eyelid, and another on the left temporal regions. Because of the proximity of the lachrymal duct we were afraid to cauterize and Drs. Van Cleve and Berger successfully treated this lesion with radium. The temporal lesion was surgically excised.

Now there is no more sloughing or sequestration and the wound is healed, leaving an ugly defect over the center of the face. The patient is ready for consideration of reconstructive surgery. Because of the carcinogenic tendencies of the patient, the poor quality of the available tissue for repair due to previous scarring from treatment with various agents, the patient's age, and his disinclination to surgery, it was thought best to use a prosthetic appliance to cover the defect. Even now the patient walks around with a smile, wearing a dressing over his nose. At least he does not have an offensive odor and can lead a fairly normal life.

Again this case emphasizes the importance of adequate treatment. It also illustrates that many of these cases can be treated satisfactorily by one of several means, e. g., irradiation, cauterization, and surgery, or any combination of them.

I do not feel that I should close this discussion without at least mentioning the matter of neck dissection. The cases must all be individualized, and no blanket statement can be made to cover all cases. However, following the rationale applied in radical breast surgery, we feel that if there is likelihood of lymph node involvement, a block dissection should be done. This might necessitate a suprahyoid, upper cervical, or a complete dissection. Blair has pointed out that patients with metastasis from the face to the neck usually do not die of extention below the neck. If then the neck glands can be eradicated, it would improve the patient's chance. Many of the cases with carcinoma of the face and mouth are old. Here the risk of doing radical surgery must be weighed against the risk of death from metastasis.

DISCUSSION BY J. P. BERGER, M.D., FOLLOWING DR. HIEBERT'S PRESENTATION

I would like for the surgeons to make more comment in regard to neck gland dissection in carcinoma of the lip and adnexa. I think in private practice we are prone to hesitate to do a neck dissection because of criticism. In the school where I was trained they demonstrated that their five-year cures were increased five per cent. I wonder if that figure is not worth keeping in mind and sometimes when we are hesitant about doing block neck dissection, it is better to ignore criticism and go ahead and do it because five chances in a hundred is nothing to turn down. The other case Dr. Hiebert discussed again emphasizes the importance of biopsy. If this patient had a proper diagnosis in the first place he would have gotten well. When a biopsy is not taken you get into trouble repeatedly by not knowing what you are treating in the first place and leaving a problem for subsequent physicians.

DISCUSSION BY N. C. NASH, M.D., FOLLOWING DR. HIEBERT'S PRESENTATION

Radical dissection of the neck is not an innocuous procedure and even in the best hands gives a mortality of about 10 per cent. If you would attack the problem as Charles Martin in Dallas has you would find that about 50 per cent of the metastatic nodules in the neck have five-year survivals by the irradiation method. This is as good as radical neck dissection without a 10 per cent

mortality staring you in the face. At least, I feel that this procedure should be given consideration in metastatic carcinoma of the neck.

DISCUSSION BY E. S. EDGERTON, M.D., FOLLOWING DR. HIEBERT'S PRESENTATION

We talk about neck dissections as a kind of light job to do. The mortality of block dissection, where you take jugular veins and all the glands, carries a mortality that is bigger than five per cent, and if we are only going to accomplish five per cent in the outcome in these cases, then at least for me and the average fellow in the community we had better be content to resort to irradiation for the follow-up treatment.

FINAL REMARKS BY DR. HIEBERT

It was not my intention to belittle the dangers of surgery in neck dissection. These people are oftentimes desperate and will beg to either be "killed or cured" rather than to die a slow death of torture. If a lesion is radiosensitive, certainly irradiation should be done. But if this is not the case, and the patient stands a chance of being cured of an otherwise surely fatal outcome, he should be given the benefit of all that surgery and every other method of treatment have to offer. We are all aware that in a small clinic such as we have here, it will be impractical to do much original work on cancer. We must look for our guidance to you older men and to the groups where they can do their work under controlled conditions in quantity to warrant conclusions.

PRESENTATION OF FIBROMYOMA OF UTERUS BY JOHN F. POHLMAN, M.D.

CASE NUMBER E.Y. 11.

White female, aged 57.

CLINICAL DIAGNOSIS: Fibromyoma of uterus.

HISTORY: Sarcoma between uterus and bladder removed October 27, 1943. Verbal report from private hospital—diagnosis spindle cell sarcoma.

FIRST SEEN IN TUMOR CLINIC: December 21, 1943.

BIOPSY:

10-27-44—Biopsy of cervix. Pathological Diagnosis: Cervical erosion.

11-21-44—Supravaginal hysterectomy and removal of mass from vagina by the vaginal route. Pathological Diagnosis: Submucous polypoid fibromyoma of uterus; vaginal fibroma showing areas of xantho-sarcomatous degeneration.

TREATMENT:

1-9-44 to 2-7-44—X-ray Therapy. Total 10,200 R through 7 fields right anterior and left posterior pelvis, left anterior and right posterior pelvis, right and left lateral pelvis and perineal. 200 KVP, 50 cm. distance, 1 mm. copper and 1 mm. alum.

4-2-45 to 4-21-45—X-ray Therapy. Total 5580 R through 6 fields right anterior and left posterior pelvis, left anterior and right posterior pelvis, right and left lateral pelvis. 200 KVP, 50 cm. distance, 1 mm. copper and 1 mm. alum.

REASON FOR PRESENTING: The remarkable palliation shown by roentgen therapy in usual non-sensitive sarcoma.

This patient originally had a fibromyoma of the uterus for which she was operated at one of the private hospitals. From there she came to the County Hospital. She was given x-ray treatment, after which the tumor seemed to subside. Then she developed a lesion on the cervix which appeared suspicious of malignancy. On biopsy it proved to be a cervical erosion, but the men in the group were not satisfied and it was decided to do a laparotomy. At that time the uterus was removed and all of the adjacent tumor tissue that could be freed. At the same time there was noted a finger-like projection growing from the vaginal wall adjacent to the cervix. This was also removed. Both biopsies proved to be malignant. She made an uneventful recovery from the operation and was given further x-ray treatment. The tumor mass has subsided and the patient is apparently well, up and around, and with no evidence of recurrence of the tumor mass.

DISCUSSION BY A. F. ROSSITTO, M.D., FOLLOWING DR. POHLMAN'S PRESENTATION

When this patient was operated on the first time the uterus and bladder were fixed by the infiltrating lesion. Because it resembled a spindle cell sarcoma, the abdomen was closed and the patient discharged as an unoperable case. The patient came to us here and we treated her with deep x-ray irradiation, giving 10,200 R, which is considered a large dose. The interesting point about this patient was the fact that she was able to be operated on at a later date and most of the uterus and mass were removed without danger of opening into the bladder. We gave her 5580 R at a later date to give her additional treatment which we thought might aid her. This patient now has gone practically two years looking well, so I believe this indicates that in spite of the fact you have a lesion which is known to be radio resistant, we did get the desired results.

CASE NUMBER W.N. 12.

White male, aged 86.

CLINICAL DIAGNOSIS: Carcinoma of right nostril.

HISTORY: Has had an open sore on the right side of nose that would not heal for about three years.

FIRST SEEN IN TUMOR CLINIC: August 24, 1943.

BIOPSY: 8-31-43—Biopsy of nose. Pathological Diagnosis: Basal cell carcinoma, Grade III.

TREATMENT:

8-30-43—Surgery. Removal of lesion by electrocautery.

9-2-43 to 9-9-43—X-ray therapy. 2400 total R to field. 120 KV, 30 cm. distance, 3 mm. alum., size of field 1 x 2.5 cm.

10-5-43—Radium therapy. 506.0 mgm. radium to nose for 5½ hours.

REASON FOR PRESENTING: Shows value of com-

bined therapy—lesion was biopsied, removed and cauterized, x-ray therapy and radium therapy were used.

DISCUSSION BY A. F. ROSSITTO, M.D., FOLLOWING PRESENTATION OF CASE NO. 12

I believe you all saw the pictures of this case on the wall. This was a large lesion of the right side of the nose. We took a biopsy of this, followed by fulguration. The biopsy showed a basal cell carcinoma.

In spite of the fact that no squamous cell was found in the lesion, we applied x-ray therapy on the patient. In spite of that treatment there was still an area about 1 cm. long that did not seem to heal and we went ahead with radium therapy, applying about 500 mgm. hours. In this clinic our radium is filtered through platinum. The treatments were completed in that order and to this date the lesion is healed.

We presented this case to show that combined therapy, surgery and irradiation has to be used on many lesions.

PRESENTATION OF CASE NO. D. G. 13 BY JOHN F. POHLMAN, M.D.

White male, aged 10.
CLINICAL DIAGNOSIS: Hematoma head.
HISTORY: Has had a bump on head for three months which has remained the same size with no history of injury. It is a soft fluctuating mass, painful at intervals at the site of the lump on the left parietal area.
FIRST SEEN IN CANCER CLINIC: May 4, 1944.
TREATMENT:
7-10-37—8 ounces bloody fluid removed from hematoma.
1-9-45 to 4-11-45—X-ray therapy. Six treatments given over the pituitary gland using 200 KVP and ½ copper 1 alum. filter. Each treatment varied from 100 to 150 R over each side of the pituitary. No epilation noted.
SEROLOGY:
10-15-37—Blood Wassermann—Kahn negative, Kolmer negative.
5-9-44—Blood Wassermann—Kahn negative, Kolmer negative.
BIOPSY:
10-12-37—Biopsy of skull. Pathological Diagnosis: Bone tissue with fibrosis and chronic inflammation of the bone marrow. No definite evidence of syphilis.
REASON FOR PRESENTING: To show the value of X-ray in treating Schuller-Christian's disease. A complicating factor in this case was the presence of diabetes insipidus.

When this patient was first seen he had a tumor mass on his head without any history of trauma. X-rays were taken of the skull and a report of Schuller-Christian's Disease was given. He was treated by x-ray therapy. Pituitary extract was orignally given by hypo in the arm by the patient's father until repeated infections had begun to scar the arm. This was followed by nasal applications of the pituitary extract. The patient has made good progress but is under almost constant supervision.

PRESENTATION OF CARCINOMA OF CERVIX BY JOHN F. POHLMAN, M.D.

CASE NUMBER M.M. 14.
White female, aged 61.
CLINICAL DIAGNOSIS: Carcinoma of cervix.
HISTORY: Has not menstruated for 15 years. Started spotting two months ago.
FIRST SEEN IN TUMOR CLINIC: October 19, 1943.
BIOPSY:
10-22-43—Biopsy of cervix. Pathological Diagnosis: Squamous cell carcinoma of cervix, Grade III.
TREATMENT:
Nov., 1943—X-ray therapy. 20 deep therapy treatments. Total R 8,000. 200 KVP, 1 copper, 1 alum. 50 cm. distance. 200 R to 2 fields daily.
2-15-44—Radium therapy. T shaped cervical applicator inserted into uterus. London applicators inserted one in either lateral formix.
REASON FOR PRESENTING: Typical early carcinoma of the cervix.

This case was presented as a typical case of carcinoma of the cervix with the usual beginning symptom of spotting. Biopsy showed squamous cell carcinoma. She was treated by radium therapy and up to this time there has been no evidence of recurrence. This carcinoma had progressed to about a stage two.

DISCUSSION BY R. H. MAXWELL, M.D., FOLLOWING PRESENTATION OF CASE NO. 14

There is one particular thing in this history that is significant. Everyone knows this fact but overlooks it—that when a woman has not menstruated for 15 years it is a well know fact that she has completed her menopause. Certainly a woman 60 years old should have completed her menopause. If she starts bleeding and spotting again, it is a definite sign of malignancy of the cervix. It is extremely important that a definite diagnosis be made. In the last year I have had two persons referred to me who had been sent to x-ray men originally for therapy without any diagnosis. A diagnosis is very important. Any patient who has started to menstruate after cessation should have a definite biopsy done. It seems to me any kind of a lesion of the cervix where the patient is in the 40's, 50's, or 60's, if it is at all suspicious, should be biopsied. Therein lies the answer to the line of treatment.

I don't believe that many of us do this type of procedure. It is necessary in these carcinoma cases that at all times we make a pelvic examination as has been described. Only in that way can you get a good evaluation of broad ligaments. The question of therapy in this particular case is the number of mgm. of radium she had. Doctor Pohlman was kind enough to look this up. She had a total dose of 6,960 mgm. R's (116 mgm. for 60 hours with platinum filter). The opinion as to the amount of radium used on these does vary. I happened to be brought up in the environment in which they

thought multiple small doses were preferable. Many excellent men feel the original dose should be large. Personally, in private practice, I have never had courage to give higher than 100 mgm., to be repeated. Certainly a patient with carcinoma of the cervix should have a minimum of 5,000 mgm. R's of radium. This is a question of dispute. Certainly many rectal fissules have been obtained through the usage of radium with inadequate packing. So, therefore, it is my opinion that smaller doses of radium used repeatedly are more successful.

DISCUSSION BY N. C. NASH, M.D., FOLLOWING DISCUSSION BY R. H. MAXWELL, M.D.

In the New York Memorial Hospital, Arneson and Quinby evaluated the methods of irradiation in carcinoma of the cervix and have clearly shown that proper application of radium and deep therapy accomplishes a better end result without endangering the bladder and rectum by over-irradiation. When you use 6700 mgm. R's directly into the cervical canal the trouble is you take a great chance of producing a latent rodent ulcer in the bladder or rectum. Whether you filter it heavy or light you still have administered a tremendously heavy dose of radium with a resulting escarotic effect upon the cervical canal, with possible stenosis. Arneson and Quinby have shown that 3,000 mgm. R's directly in the cervical canal will destroy tumor to its boundaries of the cervix. They have shown that in cases where the carcinoma has spread beyond the cervical boundaries a proper copastatic application of radium and supplementing with the deep therapy will produce a cancercydal dosage in squamous cell carcinoma about 8 cm. into each lateral pelvis without producing the over-irradiation of the cervical canal. The crux of the matter is, proper application of your irradiation will produce better results with less damage to normal tissue than attempting to cure a carcinoma of the cervix by tremendous local doses of radium.

POLIOMYELITIS, SECOND ATTACK—REPORT OF A CASE

Glen Ashley, M.D.*

Kansas City, Kansas

It would seem worth while, in view of the increasing amount of experimental work being done on poliomyelitis, to report all incidences of second attacks, thus adding to the few already on record and further substantiating the evidence that there is no complete immunity.

The number of cases reported in the literature are relatively few. Second attacks of poliomyelitis as recorded in the literature were collected and reviewed by Francis and Moncrieff in 1919, by Still in 1930, and by Fischer and Stillerman in 1938. A criterion of two years supervening between attacks was used to differentiate between second infections and re-infections. Wylie[1], in reviewing this literature in 1945, compiled 19 cases of paralytic poliomyelitis with intervals between attacks varying from two to 25 years. Cases with non-paralytic second attacks were omitted.

During the year ending December 31, 1946, a diagnosis of poliomyelitis was made on 285 patients admitted to the University of Kansas hospitals. Only those patients showing definite paresis or paralysis and with spinal fluid lymphocytosis are included in this number. The following case is of special interest:

Initial Infection: K.S., age 10 years, was admitted to the General hospital, Kansas City, Missouri,** on September 17, 1940, complaining of headache, numbness of hands and feet, and fever. Illness began on September 14, at which time he noticed soreness of neck, back, arms and shoulders, accompanied by a slight sore throat. On September 16, symptoms increased in severity, temperature rose to 102° F., and the patient vomited several times. On September 17 he began to have severe headache, noticed a roaring in his ears, had numbness of hands and feet, and was taken to the hospital.

Past history was irrelevant.

Physical examination revealed a well developed, well nourished, white male of 10 years of age who appeared moderately ill. Pharynx was slightly reddened, there was some tenderness over both mastoid regions and there was two-plus enlargement of the anterior cervical chain of lymph nodes. There was marked rigidity of the neck and back. There was no demonstrable weakness or paralysis of the extremities, knee kicks absent bilaterally, Achilles reflex was absent on the left, and Kernig's sign was strongly positive.

Laboratory examination: Urinalysis revealed an acid urine, negative for albumin and sugar, specific gravity of 1.001 with rare white blood cell seen microscopically. White blood count was 13,710 with 82 per cent polys, lymphocytes 16 per cent and

*Department of Internal Medicine, University of Kansas School of Medicine, Kansas City, Kansas.

**We wish to express our appreciation for the courtesy shown us by Kansas City, Missouri, General Hospital in allowing access to their records.

monocytes 2 per cent. Hemoglobin was recorded as 14 grams. Spinal fluid examination revealed 72 white blood cells, predominately lymphocytes.

On admission to the hospital the patient had fever of 102.6°, a diagnosis of poliomyelitis was made and 200 cc. of immune serum was given. On September 21, 1940, the temperature was normal and during remaining hospitalization did not rise above 99°. On September 20 the patient developed pain in both legs and hips without demonstrable muscle weakness. On September 22 he developed weakness of dorsiflexion of the left foot and on the following day a plaster cast was applied to the left leg. On September 25 he developed weakness in dorsiflexion of the right foot with weakness in adduction, and two days later a plaster cast was applied to the right leg, full length.

Convalescence was drawn out over several months, but the patient rapidly recovered with only residual weakness in the right thigh muscles. He had been a member of the high school football team for the past two years, walked without a limp, and apparently had almost complete recovery from initial infection.

Second Attack: K.S. was admitted to the University of Kansas hospitals on October 17, 1946, complaining of fever, stiff neck and pain in the upper right arm. The onset of the present illness was 18 days prior to admission with a sore throat, productive cough, a fever of 102° and a pain in the lower right chest. He received a five-day course of a sulfa drug, following which he was much improved. He attended school the following 12 days even though he had a constant low grade fever and a mild, slightly productive cough. Six days prior to admission and 12 days after onset of illness he began to notice slight stiffness of his neck accompanied by frequent elevation of temperature up to 101°. On October 16, the day prior to admission, he developed pain in the right shoulder and in the right triceps muscle accompanied by severe headache

Physical examination revealed a well nourished, well developed, white male of 16 years of age who appeared moderately ill. Pupils were round and equal and responded to light and accommodation. Ears, nose and throat were essentially negative. There was moderate rigidity of the neck. Inconstant, moist rales were present in the right anterior chest. Heart was not enlarged to percussion, PMI in the fifth interspace within the MCL. Blood pressure was 120/80, pulse 72, rhythm regular, no thrills or murmurs. Examination of the abdomen was negative. The right thigh was perceptibly smaller than the left. In the mid-thigh region the right measured 39 cm. in circumference, the left 42.5 cm. The right calf measured 34 cm. in circumference, the left 35 cm. There was an estimated 25 per cent muscle strength loss of the right quadriceps and adductors. The right triceps muscle showed about 25 per cent decrease in function as measured by extension of the arm at the elbow and there was about 25 per cent decrease in the grip of the right hand. Reflexes were hypoactive throughout with absence of the triceps reflex on the right.

Laboratory examination: Urine was alkaline in reaction, specific gravity of 1.020, a faint trace of albumin, negative for sugar, 0-2 rbc./hpf. Blood count showed 4,630,000 red cells with 87 per cent, or 13.5 grams, hemoglobin, 10,050 white cells with 67 per cent polys (67 per cent filamented and 0 non-filamented), 22 per cent lymphocytes and six per cent monocytes. The N.P.N. was 24, creatinine 1.2 and blood sugar 76 mgm. per cent. Spinal fluid examination on October 28 showed two plus globulin, 28 wbc. (80 per cent polys), total protein 85 mgm. Spinal fluid examination repeated on October 23 showed globulin negative, 160 wbc. (92 per cent lymphocytes), total protein 70.4 mgm. Sedimentation rate was 10 mm./hour. X-ray examination of the chest was reported as showing a bronchitis of the upper right lobe. Ten days later, on October 28, the chest was reported as radiographically normal.

Progress notes: From October 19 to October 26 the patient received 30,000 units of penicillin intramuscularly every three hours. Cough rapidly disappeared. He was started on hot packs the day of admission and within two days the pain in the right arm disappeared. Symptomatically the patient was much improved in 48 hours and his later hospital course was uneventful. On discharge from the hospital there remained about a 25 per cent strength loss of the right triceps and anterior portion of the right deltoid, 50 per cent strength loss of the extensors of the hand and fingers on the right with 25 per cent strength loss of the flexors of the right hand.

DISCUSSION

In calling this a second attack of poliomyelitis in differentiation from recrudescence, the criteria set forth by Still[2] in 1930 are used. He divided recurrences of poliomyelitis into two groups—those occurring within three months after the onset of the initial attack and those occurring after two years. The former, which he called recrudescences, were cases in which an exacerbation and extension of paralysis developed from two weeks to three months after the initial infection. He stated they were probably due to reactivation of dormant virus in the central nervous system. Those cases recurring two years or more after the initial infection he

grouped as second attacks or actual reinfections. Stating that no second attack had ever been recorded in the interval between the three month to two year periods, he considered two years to be the minimal duration of immunity that followed poliomyelitis. Kling, Peterson and Wernstedt[3] demonstrated active virus in the nasal washings of poliomyelitic patients seven months after the acute attack; hence, a recurrence occurring within seven months after the initial infection should probably be classified as a recrudescence.

Experimentally, second attacks of poliomyelitis can be produced in rhesus monkeys by the use of heterologous strains of virus. Toomey[4] in 1939 injected *Macacus Rhesus* monkeys with virulent heterologous strains of virus and produced mild or no polio infections. Following recovery, subsequent injections were made using a virulent Philadelphia strain isolated by Flexner from the spinal cord of a patient who died during the Philadelphia epidemic of 1932. These monkeys had second attacks of poliomyelitis. He states that the monkeys having severe attacks following initial injection with the heterologous virus strain occasionally contracted second attacks of the disease when innoculated with the Philadelphia strain.

Howe and Bodian[5], using homologous and heterologous virus strains and utilizing different portals of injection, have assumed that there is little doubt that most individuals do acquire an effective immunity with increasing age, and epidemological evidence favors the idea that this is produced by contact with active virus rather than by mere physiological maturation or other metabolic factors.

They state that while the concept of "abortive" poliomyelitis as an immunological agent is based upon the postulate of a generalized immunity of the central nervous system produced by a limited invasion of virus from a single portal of entry, their own findings suggest that as regards the central nervous system an immunity of this type might not be very substantial since the influence probably would be restricted to the region of immediate exposure. In 40 rhesus monkeys it was found that intracerebral, intraocular, intracutaneous, intraperitoneal, intraspinal and nasal inoculations of poliomyelitis virus produced no lesion in the olfactory bulbs despite the fact that all animals contracted pronounced paralysis. This was taken as an indication that the virus could be restricted to certain neuronal systems. Two monkeys, convalescent from an intracutaneous and an intracerebral inoculation respectively, had further paralysis after intranasal inoculation of heterologous virus. Using various uninvaded portals and using homologous virus strains, four of six convalescent monkeys showed extension of lesions but no clinical signs after inoculation. They assume from their studies of human pathology material that in man utilization is made of several portals of entry so that in order to produce effective immunity an antecedent attack must conceivably close a variety of portals leading to the neuraxis along various peripheral neurones.

As nearly as could be determined in our case, the lower extremities were not involved in the second infection, only the right upper extremity being affected. Howe and Bodian's theory as applied here would mean that some portals had been closed during the initial infection leaving an effective immunity in that region. Other portals would remain, however, and in this case the pulmonary tree must be considered, as there was definite clinical and x-ray evidence of infection in the right upper chest.

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Annual Meeting May 10-13, 1948

The next annual meeting of the Kansas Medical Society will be held at Wichita, May 10-13, 1948, and preliminary arrangements are now being made. Definite announcement of the dates was at first withheld, pending confirmation of dates for the A.M.A. meeting. Now that the A.M.A. has announced its annual session for June at Chicago, the Kansas society can hold its meeting at the usual time, during the second week in May.

A.M.A. Meeting in January

The Board of Trustees of the A.M.A. has announced that the mid-winter meeting of the House of Delegates will be held in Cleveland, Ohio, January 5 and 6, followed by a scientific session for general practitioners on January 7 and 8. The announcement included the information that more than 10 west and southwest cities had been surveyed before the decision was made, and Cleveland was chosen as the city capable of providing most satisfactory accommodations.

Reported cancer cases in Kansas increased from 87 in February to 245 in March of this year, according to a recent release from the Kansas State Board of Health, an indication of improved reporting of this disease. Also during the month of March reports were received of one case of poliomyelitis, one case of typhoid, nine cases of epidemic meningitis and four cases of rheumatic fever.

MALIGNANT TUMORS OF THE KIDNEY

Malignant tumors of the kidney may be classified as: 1. Tumors of the renal parenchyma in adults. 2. Tumors of the renal parenchyma in childhood. This is commonly a mixed growth, the socalled adenomyosarcoma of Wilm's. 3. Tumors of the renal pelvis.

The cardinal symptoms are hematuria, pain and tumor. These are common symptoms in other renal conditions and are not pathognomic.

Retrograde pyelography is the greatest aid in early diagnosis, but there are no characteristic findings. It may be necessary to repeat the examination at intervals in early cases.

Early diagnosis and prompt nephrectomy offer the only hope of cure. In tumors of the pelvis, ureterectomy should also be done. Radiation is valuable as an auxiliary measure and in treatment of inoperable cases.

All patients with hematuria deserve a complete urological investigation. Too often the bleeding clears up spontaneously and examination is postponed so that months or years elapse before the diagnosis of malignant tumor is established.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

When this appears some of the memory of a delightful camping trip will have faded. While it is now fresh in mind, I should like to share it with my colleagues. With a trailer carrying all baggage, four of us drove across Wyoming from southeast to northwest and established a camp in a beautiful spot along the Gros Ventre river about 50 miles south of Yellowstone Park. Our camp was situated in the shadow of the great Teton range of snowcapped mountains to the westward and on the bank of a rugged rushing cold mountain stream. The beauty of the sunsets was indescribable when slanting rays of the setting sun struck those high peaks and clouds. Such vivid coloring and contrasts were ever changing and yet ever beautiful.

Having angled for trout many times my greatest thrill came just before sundown one evening. Having fished upstream with fair success, I was reviewing the best holes I had found on the return trip. Casting a gray hackle fly in the eddy below a large rock in the middle of the rushing stream, I saw the silvery side of a rainbow trout dart up and strike just in time to hook him. Then my thrill began. If anyone believes for a moment that a two-pound rainbow trout on a small hook at the end of a six-pound test leader is a cinch to land, he should try it, for, in my opinion, it is about an even break between angler and fish. For ten long minutes I played him up and down 100 yards of stream before he was netted. He proved to be the largest on our trip and a real beauty.

Living close to Nature for a period, removed completely from one's routine, is a real rest. The rejuvenation of body and soul are worth more than wealth. The surest sign of God to me is the orderliness of His universe, best viewed when living in the open. Wild flowers in profusion covered the landscape. Antelope, bear, deer, elk, moose, mink, beaver, eagles and innumerable small animals were observed fending for themselves with that instinct and urge to live so evident throughout the animal kingdom. I wish every member of our Society could share the recreative value of such an experience.

L. S. Nelson

President.

EDITORIALS

A.M.A. Policy

Certainly one of the highlights during the A.M.A. centennial at Atlantic City was the speech by Dr. E. L. Bortz. Much has been written about the 125,000,000 commemorative stamps issued by the government and about the resignation of Mr. Rich. Considerable space has been given to the grandeur of the occasion, the 15,667 physicians registering for the convention, and the many foreign guests. It has been told that the mid-winter meeting, January 5-8 will be held in Cleveland, Ohio, and that next summer's convention will be at Chicago with Atlantic City and San Francisco following in succession.

Too little, we feel, has been said about the new president of the A.M.A. and the policies he advocated in his speech before the House of Delegates. The following is paraphrased from his address, outlining briefly his recommendations, many of which were original with the dynamic Philadelphia physician who now serves American medicine in the position of highest honor. All recommendations were adopted by the House of Delegates. It might be interesting to refer to these suggestions again in June, 1948, to see how they have been carried out.

Dr. Bortz recommended an additional scientific session planned for general practitioners of the nation and suggested that a two-day session be held at the time of the mid-winter meeting of the House of Delegates. Instead of keeping this in Chicago, it was his idea that the nation be divided into eight or twelve geographical districts and that these mid-winter meetings be rotated among those districts. The state medical societies within the district where the meeting will be held should assist in the preparation of the program.

It was recommended that third and fourth year medical students should be "brought into the medical family at the earliest possible time and given the privilege of more active participation in the activities and privileges of the Association" and that a student section should be added to the Journal.

Dr. Bortz recommended that the secretary, in collaboration with the councils and other bureaus, prepare an attractively illustrated booklet describing the activities of the A.M.A. and that these be distributed to the graduating class of all medical schools.

The public relations activities of the A.M.A. need clarification. The speaker recognized that public relations is a problem of interpreting the objectives of the medical profession, not necessarily in scientific terms but according to ideas that may be acceptable to the public. Each practicing physician is not only a public relations contact but, "better still, human relations contact" which the entire profession could utilize to better advantage.

More experienced representatives are needed who may appear before lay groups and legislative bodies. Organized medicine has contributed enormously toward the well-being of humanity and so have countless individual physicians all through history. To mention but one achievement, life expectancy in the United States has lengthened more than 50 per cent during the last 100 years, or from 40 years in 1847 to 67 years in 1947. These and many other achievements should be given to the people by the medical profession. The president recommends that county societies organize speakers' bureaus for training those who would be willing to serve their profession.

The Woman's Auxiliary of this association was founded 25 years ago and today "represents probably the most important instrument in the field of public relations which organized medicine has, and yet its value has been, for the most part, overlooked." He described ways in which the Auxiliary may serve organized medicine and closed with the statement that they are facing a period of expanded opportunities.

A serious crisis has developed in the nursing field. On a basis of quantity, nursing talent available is 60 per cent of what it should be. On the basis of quality, this is estimated as down to 75 per cent. It is readily admitted that nurses have many grievances, and probably it is now time that physicians should study the nurses' problems and assist this profession in obtaining an objective toward which they are striving. Dr. Bortz recommended a committee of five to be known as the Committee on Nursing Problems to be appointed and to report its findings to the next House of Delegates meeting.

Excellent work is being done by the many councils and bureaus of the A.M.A., these services extending not only to the House of Delegates but to the state and county medical societies as well. It appears, however, that a better method should be devised of channeling the information on the activities of the departments, bureaus and councils of the A.M.A. to the House of Delegates.

Should another national emergency arise, the A.M.A. will be in better position to supply our government prompt medical services, if plans as outlined by Dr. Bortz are carried out. The A.M.A.

will meet with government officials and work out in detail a program that may be followed in the future.

And, finally, it appears that space in the A.M.A. building is already overcrowded and that a building program should be planned. The House of Delegates should work toward this end now and "with this in mind, a structure should be raised, cathedral of health, if you will, dedicated to the high service of health maintenance, the prevention of disease and the extension and enlargement of human life. The A.M.A. has never been as powerful and influential as it stands today . . ." and "is on the march to more and greater accomplishments."

The County Is The Contact Point

In most countries, the local medical societies are but "branches" of the national medical organization. The triple-decker system of independent county, state and American medical associations is peculiar to the United States. It has the dual advantage of flexibility and democratic control. The A.M.A. is only a league of state medical societies: a "federacy of its constituent associations" as the A.M.A. Constitution words it. Thus the A.M.A. has no existence apart from the state societies which compose it: a fact which discourages any efforts to set up dictatorial control from the top. And in like manner, each state society is only a league of its county components. In the last analysis all power flows from and originates in the county medical society.

County societies generally suffer from a surfeit of modesty. Their officials feel that the small organization must look to the state society, if not indeed to Chicago, for policies and advice. And while it is true that by reason of size and coverage, state societies can do many things not available to the smaller units, it is equally true (but usually forgotten) that there are some functions which the county societies do better.

The county society is the contact point between the physician and organized medicine. The doctor "belongs" in a personal sense to the county society only. His membership in the A.M.A. and in the state society is secondary to, and derivative from his membership in the county society. Only the county society has meetings wherein each member has a vote in his own right. At the higher levels, only delegates vote and participate in proceedings; at the county level on the other hand, one doctor's vote counts as heavily as his colleague's.

The county society is also the best contact point between organized medicine and the public; and between organized medicine and legislator. Almost every congressman, assemblyman and senator in the country has as his personal health adviser a member of some county society. The local newspaper, the small businessman, the school teacher, the town banker, the labor union executive, and the housewife, all of these people—our "public"—are obviously in closer contact with the county society officials than they are with the state and national organizations. If, as it is said, democracy has grass roots, then in the hierarchy of organized medicine the county society is right at those roots.

Overshadowed by the more elaborate machinery available in state and national societies, county organizations often forget that they have prime facilities for a public relations job that will yield swift dividends. If there is local uneasiness about the sanitary conditions in the town's restaurants, the county society may offer to do the investigating and inspecting. If the local newspaper delivers an editorial blast at the profession, the county society can make the rebuttal long before the slower machinery at the state level can get into gear. If the service club or P.T.A. wants a health speaker, the county society can, and should furnish local medical talent.

Doctors in general are suspicious of excessive centralization. The cause of home rule can be immeasurably strengthened if county societies would function vigilantly and consistently at the local level. Even grass roots wither if not regularly attended.—*Journal of the Medical Society of New Jersey, July, 1947.*

Health Workshops

From Washington the medical society received a pamphlet entitled Investigation of the Participation of Federal Officials in the Formation and Operation of Health Workshops. The study was prepared by a Subcommittee on Publicity and Propaganda of the Committee on Expenditures in the Executive Departments. Definite accusations are made against the United States Public Health Service, the Children's Bureau and four other governmental agencies.

The committee finds "that at least six agencies in the executive branch are using Government funds in an improper manner for propaganda activities, supporting compulsory national health insurance," and recalls that the use of Federal funds for the purpose of influencing legislation before Congress is unlawful. The Attorney General has been requested to initiate proceedings to stop this unauthorized and illegal expenditure.

The committee finds that during the last five years an increase of 300 per cent has occurred in

Kansas City Southwest Clinical Society

25th Annual Fall Clinical Conference

DATES: October 6, 7, 8, 9, 1947

PLACE: Kansas City, Missouri

GUEST SPEAKERS

ARTHUR M. ALDEN (ALR) St. Louis
WM. E. ADAMS (Ch. S) Chicago
GUY A. CALDWELL (Or) New Orleans
ROLAND S. CRON (ObG) Milwaukee
JOSEPH S. D'ANTONI (Trop. Med.) New Orleans
ROBERT ELMAN (S) St. Louis
GEORGE H. EWELL (U) Madison
HOWARD K. GRAY (S) Rochester
RUSSELL L. HADEN (I.) Cleveland
JOHN S. LOCKWOOD (S) New York City
DOUGLAS W. MACOMBER (PL) Denver
ROBERT A. MOORE (Path.) St. Louis
WILLIAM J. ORR (Pd.) Buffalo
EUGENE P. PENDERGRASS (R) Philadelphia
CURTICE ROSSER (Pr) Dallas
LEON SCHIFF (I.) Cincinnati
WILLIAM D. STROUD (C) Philadelphia
WILLARD O. THOMPSON (I.) Chicago

SPECIAL FEATURES

October 6th: Clinicopathalagic Conference
October 7th, 8th and 9th: Sectional Group Lectures
October 7th: Stag Party and Entertainment

DAILY FEATURES

Round Table Luncheons (Medical and Surgical Groups)
Radio Broadcasts
Scientific Exhibits and Movies
Technical Exhibits

REGISTRATION FEE OF FIFTEEN DOLLARS INCLUDES ALL THE ABOVE FEATURES

FOR FURTHER INFORMATION, WRITE EXECUTIVE OFFICE, 630 SHUKERT BLDG., KANSAS CITY 6, MISSOURI

REFRESHER COURSE ON DISEASES OF THE CHEST

October 20, 21, 22 & 23, 1947

UNIVERSITY OF KANSAS MEDICAL CENTER, KANSAS CITY

This course has been arranged at the special request of the Kansas Tuberculosis and Health Association as a part of the program of postgraduate training sponsored jointly by the Kansas Medical Society, the Kansas State Board of Health and the University of Kansas School of Medicine.

FACULTY

Guest Instructors:

IVAN L. BUNNELL, M.D., Assistant Surgeon in the U. S. Public Health Service, Kansas City, Kansas.
MICHAEL L. FURCOLOW, M.D., Surgeon in the U. S. Public Health Service, Kansas City, Kansas.
HERMAN E. HILLEBOE, M.D., Commissioner of Health, State of New York, Albany, N. Y.
PAUL V. JOLIET, M.D., Director, Department of Tuberculosis Control, Kansas State Board of Health, Topeka, Kansas.
J. ARTHUR MYERS, M.D., Professor of Internal Medicine, Preventive Medicine and Public Health, University of Minnesota School of Medicine, Minneapolis, Minnesota.
KARL H. PFUETZE, M. D., Medical Director and Superintendent, Mineral Springs Sanatorium, Cannon Falls, Minnesota.
HENRY C. SWEANY, M.D., Medical Director of Research, Municipal Tuberculosis Sanitarium, Chicago, Illinois.

University of Kansas Faculty:

LEWIS G. ALLEN, M.D., Professor of Clinical Radiology.
MAX S. ALLEN, M.D., Associate in Medicine.
WILLIAM B. BARRY, M.D., Instructor of Otorhinolaryngology.
RALPH I. CANUTESON, M.D., Associate in Medicine.
MAHLON H. DELP, M.D., Associate Professor of Medicine.
EDWARD H. HASHINGER, M.D., Professor of Clinical Medicine.
JAMES A. JARVIS, M.D., Associate in Medicine.
KENNETH E. JOCHIM, PH. D., Professor of Physiology.
JACK M. LEOPARD, M.D., Chief Resident in Surgery.
PAUL H. LORHAN, M.D., Associate Professor of Surgery (Anaesthesiology).
JAMES E. McCONCHIE, M.D., Assistant in Radiology.
HERBERT C. MILLER, M.D., Professor of Pediatrics.
THOMAS G. ORR, SR., M.D., Professor of Surgery.
HAROLD M. ROBERTS, M.D., Instructor in Medicine.
PAUL W. SCHAFER, M.D., Assistant Professor of Surgery.
SAM H. SNIDER, M.D., Assistant Professor of Medicine.
CHARLES F. TAYLOR, M.D., Lecturer in Medicine; also Superintendent, State Tuberculosis Sanatarium at Norton.
DANIEL J. TENENBERG, PH. D., Lecturer in Bacteriology.
GALEN M. TICE, M.D., Professor of Radiology.
JOSEPH E. WELKER, M.D., Professor of Clinical Medicine.
ORVILLE R. WITHERS, M.D., Associate Professor of Medicine.
LAWRENCE E. WOOD, M.D., Associate Professor of Medicine.

For program and other information write: University of Kansas Extension Division, Lawrence

Federal expenditures for publicity and propaganda. Another piece of evidence is the letter signed by the Surgeon General of the United States Public Health Service and mailed under date of December 10, 1945, to all field men and staff operatives throughout the country, declaring that "every official of the Public Health Service will wish to familiarize himself with the President's message and will be guided by its provisions when making any public statement likely to be interpreted as representing the official views of the Public Health Service."

Considerable detail is given in describing the operation of health workshops which are planned, promoted and actually carried out by selected representatives of Federal agencies. Instruction sheets used by the training officers in presenting these workshops have the following among the topics listed: technique for the organization of citizen groups, formation of pressure groups, methods of bringing about group action.

In summary the report states, "In the opinion of your committee, this recital presents the complete picture of Government propaganda in action. The Federal employees arrange the meeting, invite the delegates, train the delegates, preside at the meetings, and then frame the formal summary of resolutions and actions. And all of this is paid for with public moneys never authorized or approved by Congress for these or any like purposes."

The committee called in some of the highest officials in these various agencies, and heard some interesting statements, such as Dr. Hilleboe's when asked if he offered all sides of the question or was limited merely to supporting material to carry out the President's order. He said, "We would naturally give emphasis to that because that is why we are in government. Otherwise we should get out of government."

When Mr. Harry Becker, health consultant of United States Children's Bureau, was asked a similar question about giving both sides of the problem, he said, "I don't know what you mean by both sides."

The report is concluded with the following statement, which is strong enough to give considerable thought to every physician in this state, "Suffice it at this time for your committee to report its firm conclusion, on the basis of the evidence at hand, that American communism holds this program as a cardinal point in its objectives; and that, in some instances, known Communists and fellow-travelers within the Federal agencies are at work diligently with Federal funds in furtherance of the Moscow party line in this regard."

VETERANS ADMINISTRATION AGREEMENT

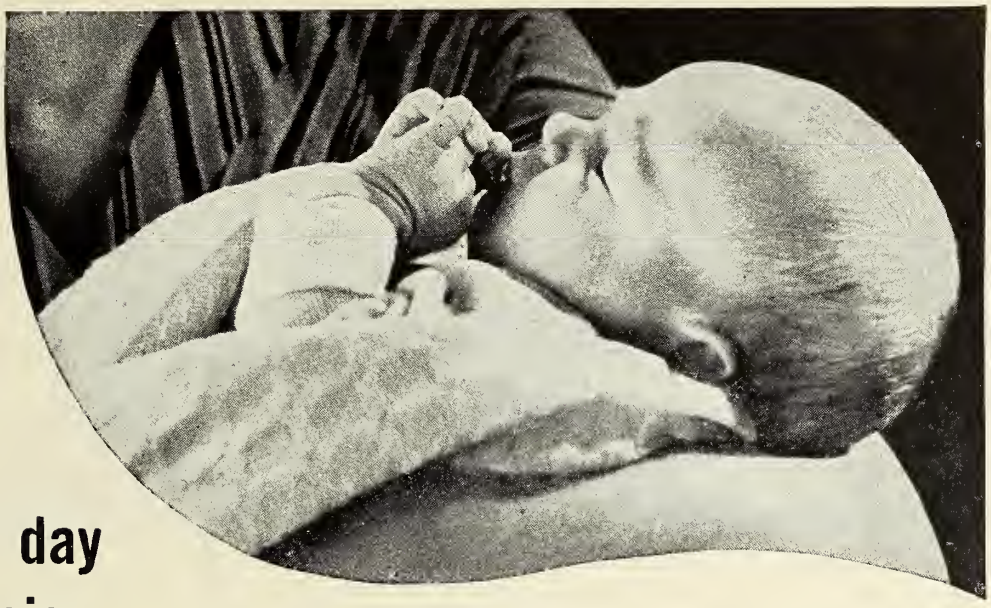
According to statistics of the Veterans Administration which were received through E. H. Gibbons, M.D., Kansas physicians participating under the agreement between the Veterans Administration and the Kansas Medical Society have received in the period between July 1, 1946, and June 30, 1947, a total of $107,945.23. During the past year the program continued to grow, month by month, and will probably result in a considerably larger figure in the next fiscal year. For example, in July, 1946, there were 214 examinations completed and 610 treatment cases authorized. In June of this year 305 examinations were completed and 2,734 treatment cases authorized. Present indications are that the increase is still continuing, especially in the number of treatments.

We beg to advise again that with a few exceptions the physicians will be paid by the Veterans Administration for treating veterans only if the condition is service connected. In all instances authorization must be received in advance if possible, at least within five days after treatment has been inaugurated. The choice of physician is left entirely to the veteran himself and no coercion shall be used by the Veterans Administration or any service organization to bring patients to any particular physician.

Examinations are different. These are made for the purpose of determining eligibility for compensation and are made at the request of the Veterans Administration because service records are incomplete. The Veterans Administration states the type of examination desired and selects the examiner, presumably on a rotating basis within any given specialty. With reference to examinations the veteran has no choice of physician. Neither has the examining physician except that it is strongly recommended that the physician not accept any examination where he is well acquainted with the veteran or where any circumstances might prove embarrassing.

The quality of examinations given by members of the Kansas Medical Society has greatly improved as a result of experience. Quality, in this connection, has never referred to medical judgment but to the legal aspects of the examination. The regulations of the Veterans Administration are now being closely adhered to and a greater proportion of all examinations completed are now acceptable. Those requiring additional work continue to be returned by the Committee on Veterans Administration Affairs of the medical society. Most common among the examinations returned are those where the physician has failed to sign his name or failed to have the veteran list his complaints.

Should a veteran request treatment, the following procedure is recommended for the quickest results with the least difficulty. (1) The physician should determine the possibility of the illness being service connected. If it is clearly not connected with service, (except where the veteran is under Public Law 16 or if the veteran is a female) the veteran will be responsible for paying for the treatment himself. (2) Where the disability might be connected with service, the physician should write E. H. Gibbons, M.D., Medical Coordinator, V. A. Medical Service Center, Masonic Temple building, Topeka, Kansas. This letter should give the patient's name and compensation number, or serial number, the tentative diagnosis and the tentative treatment plan, including hospital stay if necessary, number of office visits, home calls, etc, where indicated. (3) In case of emergency,



30 day crisis

The first 30 days of life might be called a truly critical period since the greatest number of infant deaths—62.1%—occur during this time. The proportion of infants who die within the first month has, in fact, increased nearly 10% in the past 20 years, while infant mortality on the whole was substantially reduced.*

So much the greater, then, is the importance of providing the most favorable conditions for maximum health during this fatal first month. Considering the role nutrition plays in infant health, a good start on the right feeding warrants special attention.

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* Vital Statistics—Special Reports: Vol. 25, No. 12, National Office of Vital Statistics, Washington, D. C. (Oct. 15) 1946, p. 206.

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Composition—Dextrins 75% • Maltose 24% • Mineral Ash 0.25% • Moisture 0.75% • Available Carbohydrate 99% • 115 calories per ounce • 6 level packed tablespoonfuls equal 1 ounce • Containers of twelve ounces and three pounds • Accepted by the Council on Foods and Nutrition, American Medical Association.

Literature on request

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Dr. Gibbons should be called collect, number 2-9319. (4) A prompt reply will be received declaring either that it is service connected or that it is not. Where possible, treatment will be authorized according to the physician's plan. It should be remembered that where less treatment than originally requested is found to be necessary, the bill should indicate only the treatment that was rendered. However, no bill will be allowed for more services than were authorized. If additional care becomes necessary or a different type of care, a subsequent authorization is necessary, again in advance of treatment where possible. (5) In other words, the Veterans Administration can pay only for work that has been authorized. It is the responsibility of the physician himself to see that authorization has been obtained. This can be accomplished, either by correspondence or by telephone, through Dr. Gibbons' office in Topeka. (6) Upon the completion of treatment, a statement for services rendered is presented to Dr. Gibbons and in a few days payment will be received. (7) Should any further question arise, the Executive Office, 512 New England building, Topeka, Kansas, will be glad to answer inquiries.

EXECUTIVE OFFICE

Material for this column, is taken from articles coming to the attention of the Executive Office. They may concern controversial issues and will not necessarily reflect the editorial opinion of the Journal. Articles republished or summarized here are presented because it is believed they will be of interest to the medical profession in Kansas.

On July 18 a pamphlet was issued by the National Physicians Committee entitled Factual Memorandum. In several places quotations are given from the Congressional Record, such as the statement by the Hon. Robert A. Grant, Congressman from Indiana, who said, "European collectivism is aggressive in every sphere of American life, but nowhere is it more threatening than in the national campaign to fasten upon us a system of socialized medicine. This program did not originate in the United States, but in the secret councils of world communism. It would reduce our doctors, dentists and nurses to Federal payrollers, responsive first to a new Federal bureaucracy."

Raymond Moley, internationally famous journalist, wrote for the Chicago Journal of Commerce an article entitled Subsidized Medicine which was reprinted in this pamphlet and says in part, "Nothing was ever conceived or devised which would more effectively reduce the medical profession to dependence on the government and tie state and local agencies to the wheels of the federal government. It is a threat which deserves far more public attention than it has yet been receiving."

The National Physicians Committee stated that, "It has taken ten years to unmask the forces behind the sponsorship and to force the issue into the open. NOW the sponsors have been unmasked. The issue is in the open. . . . The source of the unremitting and relentless drive for Compulsory Health Insurance—Socialized Medicine—the Political Distribution of Medical Care in this country—is the Moscow dominated Communist Party of the United States. It is essential that the forces behind the moves be recognized and that the motivation be thoroughly understood."

Further evidence in this regard may be found in an editorial entitled Health Workshops appearing in this issue of the Journal.

Also appearing in this pamphlet is an article by Willard Edwards, who wrote for the Chicago Daily Tribune on July 4, 1947, an amusing account of an incident in which Senator Murray unwittingly failed to further his cause. The article follows:

Senator Murray, D., Mont., a prominent left winger, unwittingly helped expose a senate committee witness as a Communist party member today and thereby dealt a near-fatal blow to a socialized medicine bill which he is sponsoring.

Murray's discomfiture caused hilarity in senate cloakrooms as the incident was later related. Not in years, it was agreed, has a member of congress so effectively, tho unintentionally, laid bare the secret supporters of a measure.

The witness before a subcommittee of the senate committee on labor and public welfare was Ernest Rymer, an official of the International Workers' order. He proclaimed the benefits of Murray's bill for national compulsory health insurance, which contemplates an additional 3½ per cent pay roll tax on all wages and salaries over and above existing social security and unemployment taxes.

Senator Ball, R., Minn., began questioning the witness in an apparent effort to bring out the communistic affiliations of the IWO, which is referred to more than 75 times in the records of the house committee on un-American activities.

Rymer admitted his organization was "leftist" but said it was not communistic. He insisted it was "an insurance organization."

Ball then read from an IWO pamphlet the following quotation:

"The IWO realizes that the only party that leads the working class in its struggle against capitalism is the Communist party, which united the best and proven militant members of the working class and which is bound to become even stronger until the moment will come when the workers under its leadership will overthrow the capitalist system and establish soviets."

"That was issued by your national executive committee," remarked Ball.

"I don't recall it," said Rymer.

Ball read another extract from the pamphlet:

"We find the Communist party is the only party that fights for the workers' interests. We therefore indorse the Communist party."

Rymer again said he couldn't recall these words. Ball then embarked on a lengthy questioning, during which Rymer admitted acquaintance with Max Bedacht, general secretary of the Communist party, but asserted that he was not aware of Bedacht's communistic office.

Murray finally interrupted. With an air of "let's put an end to this nonsense" and smiling broadly, he asked Rymer:

"Are you a member of the Communist party?"

The witness hesitated. His eyes were fixed upon what appeared to be a membership card which Ball was fingering.

"Yes, sir, I am," he finally faltered.

Murray, open-mouthed, stared at the witness. He appeared unable to speak and his face crimsoned.

"We've been trying to bring out the communistic affiliations of your organization," remarked Smith. "Why didn't you tell us you were a Communist before?"

"You didn't ask me," said Rymer, twisting in his chair.

Sen. Ball dropped the card he had been holding. It bore nothing except a telephone message.



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PHARMACEUTICALS, BIOLOGICALS, BIOCHEMICALS FOR THE MEDICAL PROFESSION

K. C. Clinical Society Anniversary

The silver anniversary conference of the Kansas City Southwest Clinical Society will be held in the municipal auditorium, Kansas City, October 6-9, inclusive, 1947. The list of outstanding guest speakers who will participate in the conference may be found on page 413 of this journal. All will take part in the general assemblies, round table luncheon programs and sectional lecture studies.

Five series of sectional group lectures will be presented concurrently the mornings of October 7, 8 and 9. These talks, on problems of interest to physicians in their daily practice, will be concise and will include patient demonstration. Two round-table luncheons, one medical and the other surgical, will be held each day with time allowed for questions and answers.

A joint meeting with the county medical societies will be held Monday evening and will include a clinicopathologic conference directed by Dr. Ferdinand C. Helwig. A stag party will be held Tuesday evening at the Hotel President, and all during the meeting there will be scientific exhibits and movies, technical exhibits and radio broadcasts by the guest speakers.

The complete program will appear in the September-October issue of the Kansas City Medical Journal, to be issued in mid-September.

The registration fee of $15 includes all features of the conference.

Red Cross Blood Program

Vice Admiral Ross T. McIntire, wartime Surgeon General of the Navy, has been named director of the new national blood program of the American Red Cross. The long-range program contemplates the provision of blood and its derivatives, without charge for the products, to the entire nation.

At the program's peak an estimated 3,700,000 blood donations will be required annually, necessitating establishment of strategically located centers where procurement of blood can be carried on under scientifically controlled conditions. The need for blood is a continuing day-by-day emergency, involving costs beyond the ability of the vast majority of people to meet. In times of national emergency the program would be functioning immediately to meet the needs of national defense, both military and civilian.

There are five important operations in connection with a national blood program: (1) collecting the blood; (2) processing it for use as whole blood and blood derivatives, including packing and storage; (3) distributing the blood and blood products for the needs of the people; (4) making blood available for continuous research and investigation to insure safety of the products and to determine the uses to which they may be put for the greatest benefit of mankind; (5) maintaining high standards set by the leading authorities in this field.

A program of such magnitude must of necessity be one of gradual development. Time will be required to organize the work, to procure and train personnel, and to obtain equipment which is in short supply. The first year of operation contemplates the establishment of 20 or 25 centers carefully selected with relation to the advantages they offer in the early stages. It is estimated that from three to five years will be required before the program is in full operation. In the meantime, local programs will continue on their present basis and new programs will be established with the expectation of integration with the national program later on.

In addition to whole blood and plasma, the program will provide other blood derivatives of proved value: serum albumin, used for shock and certain kidney diseases and other conditions; immune serum globulin, for modification or prevention of measles; antihemophilic globulin, effective in the treatment of hemophiliacs; blood grouping serum, for determining blood types; fibrin films, used in brain and nerve surgery; red cell suspensions, for treating certain anemic conditions; and red cell paste and powder, to promote healing of certain wounds. Any other products which continuing research may find useful in medicine and surgery will be provided.

Since people in rural districts require blood as well as those in cities, the program must be sufficiently flexible to meet widely varying conditions and needs in communities of all sizes. It is the ultimate goal to collect blood from volunteers from every community in the country and to give every healthy person an opportunity to make a contribution at least once a year. A mobile unit will be provided for those people to whom a blood donor center is not available.

Under certain conditions it may be expedient to type the donors in a community and have them available when whole blood is needed in an emergency situation. In other instances plasma or serum albumin and other stable derivatives will be made available and will tide cases over until whole blood can be transported from a central depot where all types are constantly on hand. In this way the program will be enabled to fulfill its purpose to furnish blood, blood plasma, and all of its derivatives to all the people of this country irrespective of race, creed, color or financial ability to pay. The only charge ever made to any patient will be a reasonable one by the physician or hospital for professional services in administering the material. The Red Cross will make no charge.

That part of the program which deals with collecting blood will operate substantially along the same lines as the wartime blood program, with established blood donor centers, and with mobile units to cover outlying communities. Red Cross chapters will assume the important responsibility of complete community organization to enroll blood donors and will arrange for the bleedings as needs require.

That part of the program which deals with processing of the blood will involve highly skilled work. Some of the blood collected will be examined, typed, and distributed to local hospitals for use as whole blood; some of it will be shipped to commercial laboratories with which contracts will be made by national headquarters to fractionate blood into its derivatives. It is believed that approximately 60 per cent of the blood collected will be used as whole blood.

That part of the program which deals with distribution involves making the best possible arrangements that will afford ready accessibility of the blood and blood products to all people and their physicians and hospitals, including veterans, military, and marine as well as civilian hospitals.

That part of the program which deals with continuous research and study as to the effectiveness and new uses of the blood products will be carried on by research authorities with the guidance of the Blood and Blood Derivatives Committee of the American National Red Cross Advisory Board on Health Services.

Operating centers of the National Blood Program will be selected and established only after full consultation between the national organization and the chapters concerned. Such chapters will be furnished with complete and detailed information covering the method of organization of the chapter blood donor service, ground work for community support, public relations and promotion, the use of publicity, suggested publicity aids, the opera-

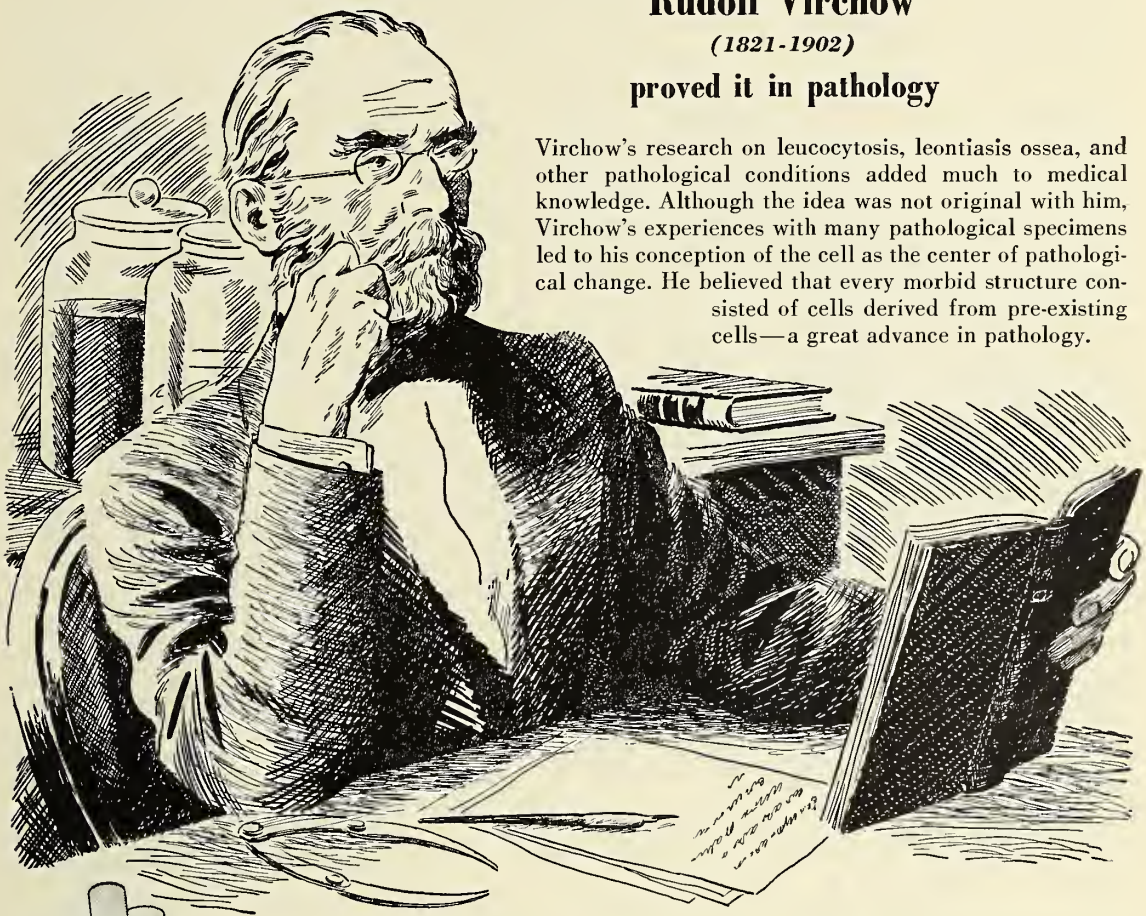
Experience is the Best Teacher

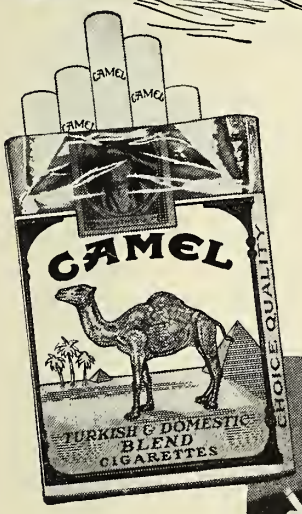
Rudolf Virchow

(1821-1902)

proved it in pathology

Virchow's research on leucocytosis, leontiasis ossea, and other pathological conditions added much to medical knowledge. Although the idea was not original with him, Virchow's experiences with many pathological specimens led to his conception of the cell as the center of pathological change. He believed that every morbid structure consisted of cells derived from pre-existing cells—a great advance in pathology.

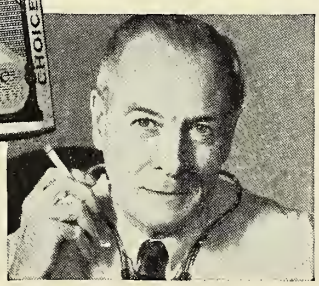




Yes, and experience is the best teacher in smoking too!

EXPERIENCE during the wartime shortage taught smokers the differences in cigarette quality. Millions of people smoked more different brands then than they would normally have tried in years. More smokers came to prefer Camels as a result of that experience, so that today more people are smoking Camels than ever before.

But, no matter how great the demand, we don't tamper with Camel quality. Only choice tobaccos, properly aged, and blended in the time-honored Camel way, are used in Camels.



According to a recent Nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

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Winston-Salem, N. C.

tion of the blood donor center, clinic instructions, and the relationships between chapters, area, and national headquarters.

The program will be financed through contributions made by the American people. Each year the Red Cross fund campaign will take into consideration the amount necessary to carry on this important new service. The cost for the first year may be between three million and five million dollars. The costs of operation of the centers will be shared on an equitable basis between the national organization and the chapters.

Music in Treatment of Disease

A study of the use of music in the treatment of disease is being conducted by Music Research Foundation, Inc., a non-profit organization with headquarters at Silver Springs, Maryland. Dr. R. C. Williams, assistant surgeon general of the U. S. Public Health Service, has accepted appointment as a member of the board of directors of the organization.

There has been interest in the use of music in treating disease for a number of years, and during World War II there was revival of such interest. It has been proposed that a program of scientific inquiry into the therapeutic use of music be initiated, and selected psychiatrists will conduct investigations into the kind of music which has most therapeutic value and the types of mental patient most responsive to its use. Methods of integration and utilization of present knowledge by leading mental institutions will be explored. The foundation will sponsor studies in the field of physics on phases having a bearing on this use of music and, through the use of fellowships, will conduct and initiate special psychological studies.

Squibb Sponsors Visiting Lectureship

A program to further the interchange of medical knowledge between North and South America has been begun under the sponsorship of E. R. Squibb and Sons Inter-American Corporation and the Squibb Institute for Medical Research, comprising a series of visiting lectureships on each continent.

Under this plan Dr. Arthur W. Grace, professor of clinical dermatology and syphilology at the Long Island College of Medicine, went to South America in July for a seven-weeks lecture tour. He will visit the leading universities and hospitals in principal cities and will address undergraduate and postgraduate groups as well as members of the profession. In Buenos Aires he will participate in a dermatological conference and in British Guiana will address the local branch of the British Medical association.

Medical representatives from South America will visit this country on the same basis, stimulating the exchange of advances in medical education, research and practice.

Diabetes was the third cause of death among girls between 15 and 20 years of age in Kansas, in 1945, according to a report from the Division of Vital Statistics of the State Board of Health. It was the seventh cause of death among young men of the same age for the same period. Diabetes was also found to be a major cause of death among women 30 to 35 years of age. From these statistics it becomes apparent that youth in their late teens and all adults need to arm themselves with the latest knowledge on diabetes.

EMIC Liquidation

Although complete records will not be available for about two years, books for the EMIC program are now being closed, with a record of 1,421,000 cases completed or approved for care from March, 1943 to June 30, 1947, the U. S. Children's Bureau has announced. Full term care is still to be provided for all wives and infants now receiving care and for all those eligible for care as of June 30.

Liquidation of the program was directed by Congress in its appropriation for 1947-48 to the Children's Bureau, but cases accepted for care under the program had already dropped to an average of 9,300 a month in 1947, a small number in comparison with 47,000 cases during the peak month of the war period. Of these 9,300 cases per month, 5,500 are for maternity care.

Congress specifically continued the program for all wives and infants for whom care is already authorized and made similar provision for any serviceman's wife and child if she was pregnant June 30, 1947, even though application for care had not been made before that time.

Starting as an emergency measure to provide care for wives and infants of men in the four lowest pay grades of the armed services, the program turned out to be the largest public medical care program for mothers and children ever undertaken in this country. More than 48,000 doctors in private practice and hospitals all over the country were cooperating in the program in 1945, and at that time one of every seven babies born in the United States was born under the EMIC regulations.

An appropriation of $3,000,000 was made by Congress for liquidation of the program, and books of the Children's Bureau show that a total of $124.900.000 was allotted to states to cover costs up to June 30, 1947. An average of $100 per case went for maternity care and $67 per case for infant care during illnesses. Doctor bills have totalled $50,500,000 and hospital bills $63.500.000.

The Children's Bureau reports that Kansas received $2,119.468 during the period from May, 1943, through June 30, 1947. The books show that there were 22,790 maternity cases and 5,650 infant treatment cases.

Hepatitis Research in Germany

A research center for study of infectious hepatitis has been established by the American Army at Bayreuth in Bavaria in one of Hitler's "Youth through Joy" hospitals, probably the finest establishment of its kind in the world. A laboratory for the same study has been set up at the University of Heidelberg.

The causative organism and method of transmission of hepatitis, which first attracted wide attention during the war, have thus far defied detection. It is a malady characterized by fever, nausea and abdominal disturbances, usually accompanied by the yellow color associated with jaundice. It has been established that it is due to a filterable virus, but the virus itself has not been isolated and no experimental animal subject to the malady has been found.

The virus is known to be extremely infective, but there is no agreement as to how the disease is spread or as to its incubation period. There is some evidence that the virus is spread from person to person in water, and there is reason to believe that the disease is much more common than generally supposed, often in a sub-clinical form not recognized by the victim.

The study in Germany is being carried out under the direction of the Commission of Virus and Rickettsial Disease of the Army Epidemiological Board.

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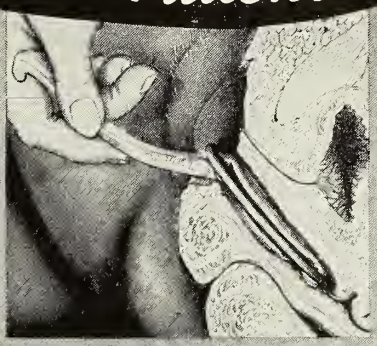
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NO. 4 Beginning insertion of diaphragm.



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Residency Program Proposed

A proposal to establish a residency training program for young American medical corps officers now stationed in Germany was made by Major General Raymond W. Bliss, Surgeon General of the Army, on his return from inspecting American military medical installations beyond the Rhine. He felt that such a program would be of benefit to the doctors, whose work in the Army is usually with patients having acute, short illnesses, and would also be of immeasurable help to the German civilian population.

German medicine, once among the finest in the world, has fallen to an almost unbelievably low estate, he said. Many hospitals and laboratories are in ruins, and some of the foremost physicians and medical scientists, closely associated with the Nazi regime, are still in concentration camps. In addition, the load of patients is greater than ever before.

General Bliss feels that the shortage of medical care in Germany should be alleviated, and that American doctors there, many of whom have just started on their professional careers, should take advantage of the clinical opportunities offered.

Instructional Course in Allergy

The annual fall graduate instructional course in allergy, under the sponsorship of the American College of Allergists, will be given in Cincinnati, Ohio, November 3-8, 1947, with the Medical College of the University of Cincinnati as host.

Forty-six formal lectures by a faculty of more than 40 outstanding physicians and scientists of the United States and Canada will be presented, and there will be an allergy clinic of case presentations. Informal discussions will be led by members of the faculty. The course presents a comprehensive study of the entire field of allergy —the fundamentals, special allergies, specific diseases, modern methods of treatment, preparation and standardization of extracts, and skin testing.

Programs and complete information can be obtained from Dr. Fred W. Wittich, 423 LaSalle Medical building, Minneapolis 2, Minnesota.

Oreton for Breast Cancer

A preparation from the laboratories of the Schering Corporation at Bloomfield, New Jersey, has been used recently in treatment of advanced carcinoma of the female breast with favorable results, according to clinical research workers at New York's Memorial Hospital Cancer Clinic, reported by Dr. Frank E. Adair. Large doses of Oreton, testosterone propionate, brought improvement in general health to more than half of inoperable cases of breast cancer so treated.

Relief from pain and regression of the metastases to the bone, with formation of new bone, resulted. These developments were obtained in patients for whom surgery and x-ray offered no help. In reviewing the cases Dr. Adair said, "We have now arrived at the point where it has become profitable to pursue the use of hormone therapy in certain types of human cancer. Up to this time we had been hampered in our clinical research. Schering Corporation generously made it possible for us to commence our new attack employing large doses."

Further studies on earlier less advanced cases are under way and the results of these experiments soon will be published.

Birth Rate Higher in 1947

Births in May are estimated to have numbered 302,000 in the United States, according to figures released by the National Office of Vital Statistics, U. S. Public Health service, last month. This is 29 per cent more than the estimate for May of last year, and it brings the total for the first five months of this year to 1,572,000.

Although the birth rate of 26.4 per 1,000 population for the five-months period January to May was nearly 40 per cent higher than the provisional rate of 19.1 for the corresponding period of 1946, it was lower than in the last four months of 1946 when it reached record breaking heights.

"Blue Baby" Operation Described

Four hundred operations performed at Johns Hopkins hospital, Baltimore, to prolong the life expectancy of "blue babies" were described at the June meeting of the American Heart Association at Atlantic City.

A report made by two Baltimore physicians, Dr. Helen B. Taussig and Dr. Alfred Blalock, showed that when there was a narrowing of the artery leading from the heart to the lungs resulting in a "blue baby," the symptoms would disappear if a branch of the artery going to the arm were tied to the partially obstructed artery. If no operation is performed, babies with this disease have marked limitation of activity and die at an early age.

Winthrop and Stearns Merge

The sales staffs of Winthrop Chemical Company, Inc., and Frederick Stearns and Company, both units of Sterling Drugs, Inc., will be merged into a single organization as of September 1, 1947, according to announcement by the parent company. The entire field staff of both companies will be consolidated into a single staff selling the products of both units.

Military Films Available

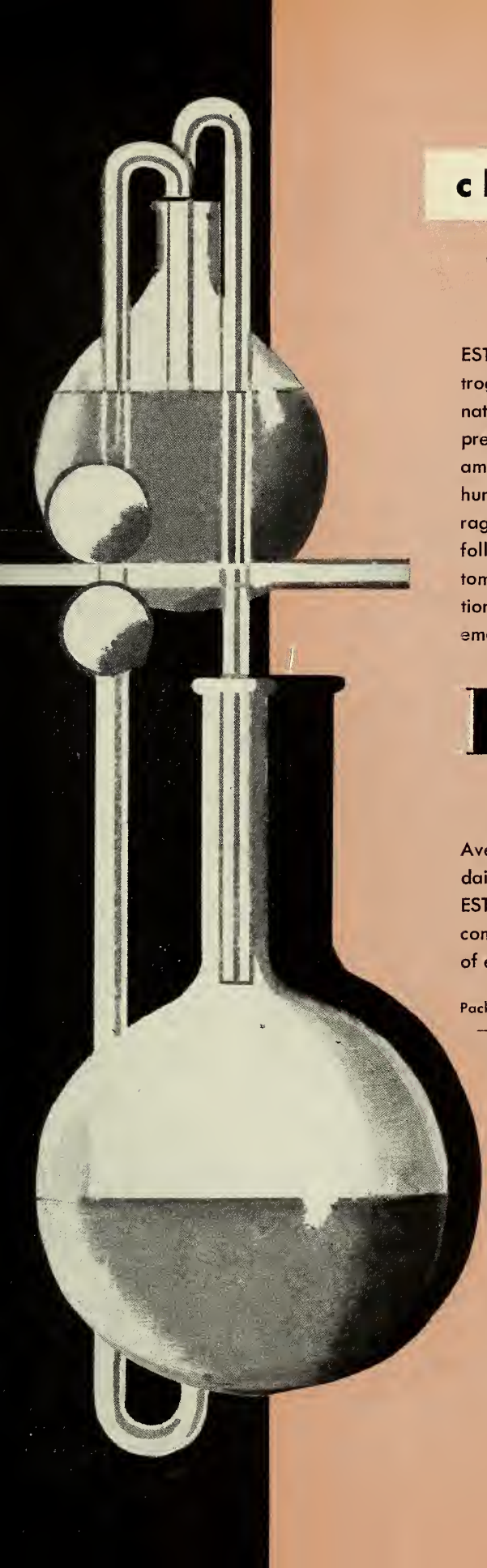
A number of motion pictures produced by the Bureau of Medicine and Surgery of the U. S. Navy during the war are being included in the A.M.A. film library and will be readily available to county and state medical societies. Medical films produced by the Army are now available on a loan basis from the Division of Training and Education, Office of the Surgeon General, War Department, Pentagon Building, Washington 25, D. C.

New Hospital Magazine

A new pocket-size monthly magazine, "Trustee," for hospital governing boards will be published before October 1, according to announcement by the American Hospital association, whose Board of Trustees approved a sample copy in June. It will be distributed to hospital administrators and trustees, with complimentary copies to presidents of the boards of institutions holding membership in the association and subscriptions available to others. The magazine will contain no advertising.

Blood Typing Program

A program of blood typing designed to eliminate confusion when emergency blood transfusions become necessary in the future is now being conducted in Pratt under the sponsorship of the Pratt County Medical Society and the American Red Cross. A list of blood types of men residing in the area is being compiled at a center where volunteers are tested.



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1. Bickers, W.: Am. J. Obst. & Gynec. 51:100, 1946.

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ABSTRACTS

Feeding of Premature Infants

Comparison of Human and Cow's Milk. Harry H. Gordon, M.D., S. Z. Levine, M.D., and Helen McNamara, M.A. Am. J. Dis. Child. 73:442-452, 1947.

The present report compares the gains in weight of 122 premature infants fed human milk or mixtures of cow's milk under comparable conditions of nursing, medical and environmental conditions. Birth weights of these infants varied between 1000 and 2000 grams (two pounds, three ounces and four pounds, six ounces). Most of the infants were born in the New York hospital, few infants being transferred from other hospitals.

Fourteen infants whose weights at admission were less than 1000 grams gained well on the mixture of half-skimmed milk, the rate of gain approximating that of the "smaller" infants in the larger study.

All infants resided in an air-conditioned nursery, temperature 77 F, relative humidity 65 per cent. Routine feeding schedule consisted of (a) fasting minimum of 12 hours after birth (b) larger infants were fed 8 to 15 c.c. of five per cent solution of dextrose every three hours for the next 12 hours (c) 15 to 30 c.c. of equal parts of five per cent dextrose and the chosen feeding mixture for the next 12 hours, and (d) 15 to 20 c.c. of the feeding mixture every three hours thereafter gradually increased as tolerated. Gavage of feedings was frequent if prescribed amount of feeding was not assimilated otherwise.

Vitamin K was given routinely on admission and sulfonamide or penicillin was used freely as prophylaxis. By the end of the first week all infants were receiving mixtures of 120 calories per kilogram per 24 hours. Daily ascorbic acid was given beginning the fourth day and concentrates of Vitamins A and D by the seventh day of life.

Under conditions of modern hospital practice, with accepted technique of premature care, the use of mixtures of cows milk will produce larger gains in weight than will human milk.—*D. R. D.*

* * *

Early Evidence of Psychoses in Children

Special Reference to Schizophrenia. Charles Bradley, M.D. J. Ped. 30:529-540, 1947.

A physician should be familiar with the early manifestations of psychoses occuring in childhood. This study defined psychosis as "a severe mental disturbance in which all the usual forms of adaptation to life are involved" and in which "disorganization of the personality is extreme." The reactions of mentally ill children can be properly evaluated only in terms of what is anticipated for most children of similar age and maturity, and no single standard scale of normality covers the entire childhood period.

Schizophrenia is the only psychosis generally accepted as occuring in children before 13 years of age. During childhood this psychosis may be defined as a rare but severe distortion of the personality peculiarly by a diffuse retraction of interest from the environment, i.e. the child's diminution of appropriate effective contact with reality, loss of interest in his surroundings, failure to derive emotional satisfaction from the ordinary events of life, or preoccupation with subjective matters to the exclusion of external situations.

One hundred thirty-eight maladjusted boys and girls were included in this study. Fourteen of this group were considered schizophrenics, diagnosis being based on eight major behavior characteristics. These in order of frequency and apparent importance were as follows: 1. seclusiveness; 2. irritability when seclusiveness was disturbed; 3. daydreaming; 4. bizarre behavior; 5. diminution of personal interests; 6. regressive nature of personal interests; 7. sensitivity to comment and criticism; 8. physical inactivity.

These traits were diagnostically significant as early as the fourth year, and the early history of schizophrenic children revealed evidence of maladjustment before two years of age in most instances.—*D. R. D.*

* * *

Some Effects of the Rice Diet Treatment of Kidney Disease and Hypertension

Walter Kemper, M.D., Bulletin N. Y. Academy of Medicine, July 22, 358-370.

Oxygen lack injures kidney cells selectively—they lose their ability to oxidize ketoacids. Therefore, in damaged kidneys it is proper to remove from the diet those substances from which ketoacids are derived. The rice-fruit-sugar diet does this and has usefulness where obvious renal involvement exists, but it is not useful in hypertension when no kidney disease exists. On this 2000 calorie diet 65 per cent of patients with primary kidney disease improved and 62 per cent with hypertension vascular disease improved. In a significant number EKG changes returned to normal, papilledema, hemorrhages or enudates and retinopathy were arrested or cleared up. The author feels that before surgery for serious hypertension the rice diet should be tried.—*P. W. M.*

* * *

Intravenous Liver Extract

Report on Experience with Intravenous Liver Extract in the Management of Cirrhosis of the Liver. Lobby, Shank, Kunkel and Hoagland, Rockefeller Institute Report, J.A.M.A. April 19, 1947.

Anorexia disappeared, hypoproteinemia was overcome and edema disappeared, ascites ultimately ceased to collect, liver function improved. No lipotropic agents or B complex was used. Usual dietary plans were followed and patients were on limited activity. The specially prepared liver extract has been supplied by and is available from Lederle, Lilly and Parke Davis. Careful sensitivity tests are first made and then injections of gradually increased amounts diluted in normal saline are given daily and later are continued thrice weekly.—*P. W. M.*

* * *

The Acute Infectious Diseases

Archibald L. Hoyne, M.D., Med. Clin. North Am. 31: 61-71, 1947.

Diminished prevalence, fewer serious complications, and lowered fatality rates have been observed in nearly all of the acute infectious diseases. Widespread immunizations and advancement in sanitary science have been powerful forces in the curbing of mortality.

Diphtheria: In 1921, there were 2,165 diphtheria cases admitted to the Chicago Municipal Contagious Disease Hospital, in contrast to only 23 in 1945. Treatment with diphtheria antitoxin is not always sufficient. A patient ill for three days before antitoxin is given 10 per cent glucose in distilled water intravenously each 24 hours for eight days. Not more than 60,000 units of diphtheria antitoxin is considered necessary. Adrenal cortex extract in doses of 3 c.c. to 5 c.c. once or twice daily seems to be helpful in some cases. Pencillin was also given to severe cases.

Scarlet Fever: Now much less prevalent and milder

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today than only a few years ago with markedly lowered mortality rate. Serious and even fatal complications have sometimes followed what appeared a mild attack of scarlet fever. Therefore, the patient should receive one of the following therapeutic agents: convalescent scarlet fever serum, scarlet fever antitoxin, or penicillin. Sulfonamides are of value only in the treatment of the complications.

Measles: Gamma globulin 2.5 c.c. to 5 c.c. should be given intramuscularly within three days of exposure. If it is desired to modify the attack of measles, five or six days should elapse after exposure before making the injection. In treatment use amidopyrine, in doses of one grain per year of age up to five grains, given three to four times daily for a period of three to four days. Measles encephalitis develops in about one in 1,000 cases of measles. More than one-third of the patients make a complete recovery; sometimes as many as one-third have died, and others were left with permanent mental defects.

Whooping Cough: In recent years has accounted for more deaths than nearly all the other common contagious diseases combined. It is particularly fatal during the first year of life. Sauer's pertussis vaccine is the most popular in the middle west. Eight months is the usual age selected for starting specific immunization. Concentrated human hyperimmune pertussis serum may be given intramuscularly in doses of 2.5 c.c., and repeated if necessary. The sulfonamides and penicillin are used for the complications. Sedatives are rarely used in hospital practice.

Meningococcic Meningitis: The case fatality rate was 55 per cent in 1930 and 39 per cent in 1940. Since 1934 the author has not considered intrathecal treatment necessary. Many of the patients did not receive one spinal puncture. The clinical diagnosis was confirmed by either a positive blood culture for meningococci or by a positive smear from petechiae when the latter were present. Recently intrathecal penicillin has been advised by many authorities. However, we continue to believe that intrathecal therapy is not only unnecessary for any kind of meningitis but that it may be actually harmful. The sulfonamide drugs are used routinely. For children under five years our initial dose is usually two to three grams, followed every four hours by from 0.5 to 1 gm. The initial dose is given intravenously in distilled water or normal saline. Sulfonamide therapy is usually discontinued by the eighth to tenth day. It is well to give adrenal cortical extract to patients with extensive hemorrhages in the skin, regardless of whether or not it is thought the Waterhouse-Friderichsen syndrome exists. Penicillin is of value for complications, particularly endophthalmitis.

Influenzal Meningitis: Occurs more frequently under five years of age, still carries a high fatality rate. Type B anti-influenzal rabbit serum developed by Alexander, 50 to 150 mg., is given intravenously. This latter will probably be replaced by streptomycin in 100,000 units every three hours for five to eight days intramuscularly.

The other meningitides respond well to sulfonamides and penicillin combined with the addition of type specific serum in Pneumococcic meningitis.—*D.R.D.*

Testosterone Proprionate Therapy

Testosterone Proprionate Therapy in One Hundred Cases of Angina Pectoris. Maurice A. Lesser, Boston Journal of Clinical Endocrinology, Aug. 6, 549-557.

Ninety-two men, eight women in ages from 34 to 77 with established angina pectoris were treated using 25 mgm. doses of Testosterone proprionate. One dose twice weekly for two weeks, then once a week until improvement occured, was the plan adopted. Some required 15 to 25 injections but the average was 12. Relief persisted from two to 34 months. Fifty-one had marked and 40 moderate beneficial results. Neither age of patient nor duration of angina had any bearing on results. No changes in heart size or contours nor of EKG was noted. Increased comfort and capacity for work was observed.—*P.W.M.*

* * *

Virilizing Ovarian Tumors

Pederson, Jorgen, Journal of Clin. End., Vol. 7, *No.* 2, *Feb.*, 1947.

This author points out that a distinction is usually made between two different virilizing ovarian tumors: arrhenoblastoma and "adrenal-like" ovarian tumor. Discusses various theories as to etiology of these virilizing tumors; favors a theory that these tumors are all androblastomata; that is, all arise from a potential male mesenchyme nucleus, with differentiation in various degrees. However, he discusses work of Kepler and co-workers, who pointed out that adrenal-like tumors, in addition to being virilizing, are associated with many of the stigmata of Cushing's syndrome.

Reports one case in a 50-year-old woman who developed quite typical virilism and was found at operation to have an adrenal-like ovarian tumor of the diffuse nonlipoid containing type. Usual postoperative improvement was demonstrated, except that partial baldness and moderate clitoral enlargement were present 14 months afterwards.

In the discussion, he points out that excretion of androgens and 17 ketosteriods in these cases may be within normal or low pathological limits; however, final conclusions cannot be drawn because of comparatively few studies done. Even in cases where excretion is within normal limits, there is a postoperative fall.—*E.J.R.*

Hospital Construction Act Signed

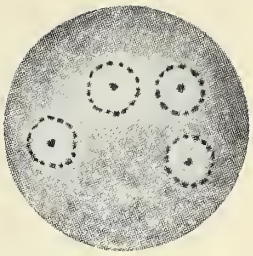
Construction of 225 million dollars worth of hospital and health facilities during the fiscal year 1948, ending June 30 next year, will be possible under the appropriations act signed by the President on July 8, Thomas Parran, Surgeon General of the U. S. Public Health Service, reported recently.

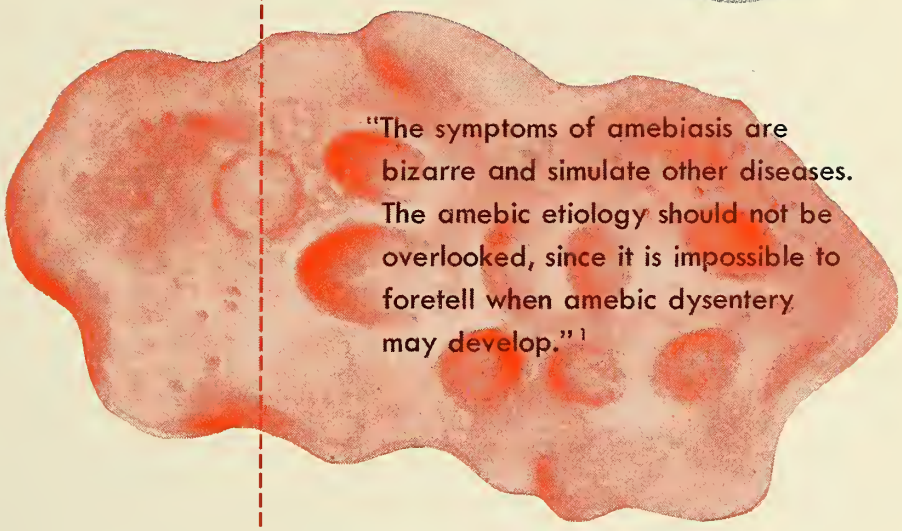
Although no federal funds were directly appropriated for this purpose, the act sets up a procedure patterned after the program of federal aid for highway construction, which obligates the federal government to pay up to $75,000,000 as its share of approved hospital construction. Since the federal government pays one-third of the cost, this brings the potential combined total of federal, state and local funds to $225,000,000. Under this arrangement, states need not delay hospital construction plans since they have assurance that any construction project approved by the Surgeon General creates a contractural obligation on the part of the federal government to meet its one-third share of the cost.

This legislation implements the construction phase of the Hospital Survey and Construction Act passed by Congress last year, authorizing the appropriation or three million dollars for survey and planning and 75 million dollars for construction annually for five years. Funds may be used for health centers, laboratories, clinics and other medical facilities, as well as for hospitals.

All states and territories are conducting inventories of hospital and health facilities. More than half of the states will have submitted their plans by fall, and three states, Indiana, Mississippi and North Carolina, have submitted plans which have already received approval.

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1. D'Antoni, J. S.: Amebiasis, Recent Concepts of Its Prevalence, Symptomatology, Diagnosis and Treatment, Internat. Clinics 1:100 (March) 1942.

2. Mansan-Bahr, P.: Some Tropical Diseases in General Practice, Glasgow, M. J. 27:123 (May) 1946.

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ANNOUNCEMENTS

September 22-25—Forty-ninth Annual Convention, American Hospital Association, St. Louis, Missouri.

September 28-October 4—Twelfth Annual Assembly and Convocation, International College of Surgeons, United States Chapter, Chicago, Illinois. Meetings at the Palmer House and Hotel Stevens, operative clinics at Cook County Hospital.

October 1—Fourth Annual Meeting, Mississippi Valley Medical Editors Association, Hotel Burlington, Burlington, Iowa. No registration fee.

October 1-3—Twelfth Annual Meeting, Mississippi Valley Medical Society, Municipal Auditorium, Burlington, Iowa. Programs may be obtained from Harold Swanberg, M.D., 209 W.C.U. Bulding, Quincy, Illinois.

October 6-9—Silver Anniversary Conference, Kansas City Southwest Clinical Society, Kansas City, Missouri.

October 27-30—Annual Meeting, Oklahoma City Clinical Society, Biltmore Hotel, Oklahoma City, Oklahoma.

November 3-8—Graduate Instructional Course in Allergy, Cincinati, Ohio. Sponsored by American College of Allergists under auspices of Medical College of University of Cincinati.

January 5-8—Midwinter Meeting, House of Delegates, American Medical Association, Cleveland, Ohio.

January 7-8—Scientific Session for General Practitioners, American Medical Association, Cleveland, Ohio.

April 19-23, 1948—Twenty-ninth annual session, American College of Physicians, Civic Auditorium, San Francisco, California.

May 6-8, 1948—Annual Meeting, American Association for the Study of Goiter, King Edward Hotel, Toronto, Canada.

MAY 10-13—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, WICHITA, KANSAS.

MEMBERS

Dr. Paul C. Carson, who has been practicing in Wichita for 26 years as a pediatrician, has announced his retirement.

* * *

Dr. Lewis G. Allen, Kansas City, was named to a four-year term on the Board of Chancellors of the American College of Radiology at its recent meeting in Atlantic City.

* * *

Dr. F. C. Beelman, Topeka, secretary of the Kansas State Board of Health, was recently elected president of the State and Territorial Health Officers Association.

* * *

Dr. J. Howard Gilbert, Seneca, has been named Nemaha county health officer.

* * *

Dr. C. O. Merideth, Jr., Emporia, returned August 31 from France where he served as head physician and surgeon for the American contingent attending the Boy Scout international jamboree.

Dr. Daniel R. Wilson, who has been assistant psychiatrist at the Larned state hospital, has moved to Glasco and has opened an office there.

* * *

Dr. A. C. Flack, Fredonia, has announced his retirement from active practice.

* * *

Dr. Fred Mayes, Topeka, assistant state health officer, went to Massachusetts last week to begin work at Harvard on a master's degree in public health.

Hospital Association to Meet

The 49th annual convention of the American Hospital association will be held September 22-25 in St. Louis. There will be a general session on Monday afternoon, followed by separate sections on professional practice, administrative practice, hospital planning and plant operation, and special aspects of hospital administration.

Topics slated for special consideration include raising standards of medical practice in the large and smaller hospital, Blue Cross contract rates, the Hospital Survey and Construction Act, government hospitals, personnel management, care of the psychiatric patient, children's hospitals, nursing and nursing education, public relations, and outpatient services.

Death Notices

FREDERICK EUGENE VEST, M.D.

Dr. F. E. Vest, 88, an honorary member of the Shawnee County Medical Society, died at the University of Kansas Medical Center August 4. He had been practicing in Topeka since 1911, specializing in diseases of the ear, nose and throat. Dr. Vest received his medical education at Iowa Medical College and Jefferson Medical College of Philadelphia, graduating from the latter in 1887. He first practiced in Montezuma, Iowa, and went to Vienna for two years postgraduate work before opening his office in Topeka.

* * *

VICTOR C. EDDY, M.D.

Dr. Victor C. Eddy, 85, a member of the Northwest Kansas Medical Society, died at Colby, August 9. A graduate of Hahnemann Medical College and Hospital, Chicago, in 1894, Dr. Eddy practiced several years in Madison, Wisconsin, before coming to Kansas, locating in Colby in 1897. He served two terms on the Kansas State Board of Health, from 1906 to 1912 and from 1925 to 1931. A son, Dr. Murray C. Eddy of Hays, is also a member of the Kansas Medical Society.

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K. U. REFRESHER COURSE ON DISEASES OF THE CHEST

PROGRAM

Monday, October 20

8:30 Registration
9:30 THE AMBULATORY COUGH, Dr. Edward H. Hashinger
10:00 PHYSIOLOGY OF THE CARDIO-RESPIRATORY SYSTEM, Dr. Kenneth E. Jochim
11:00 Recess
11:15 NEWER CONCEPTS IN TUBERCULOSIS, Dr. Herman E. Hilleboe
12:15 TUBERCULOSIS IN PREGNANCY, Dr. Sam H. Snider
12:45 Luncheon
1:30 APPRAISAL OF RESULTS OF SURVEY WITH TUBERCULIN TEST AND X-RAY OF COLLEGE STUDENTS, Dr. Ralph I. Canuteson
2:00 THE GENERAL PRACTITIONER'S ROLE IN TUBERCULOSIS CONTROL, Dr. Herman E. Hilleboe
3:00 EVALUATION OF LABORATORY METHODS FOR ISOLATION OF TUBERCLE BACILLI, Dr. Daniel J. Tenenberg
3:30 MYCOTIC PULMONARY DISEASE, Dr. Ivan L. Bunnell
4:00 THE DIAGNOSIS AND SURGICAL TREATMENT OF BRONCHIESTASIS, Dr. Paul W. Schafer

Tuesday, October 21

9:30 SURVEY IN KANSAS WITH MASS X-RAY (MINATURE FILM), Dr. Paul V. Joliet
10:00 THE MANAGEMENT OF SUSPECTED TUBERCULOSIS, Dr. Lawrence E. Wood
10:30 THE DEVELOPMENT AND POSSIBLE FATE OF TUBERCULOSIS ON THE EARTH, Dr. Henry C. Sweany
11:30 Recess
11:45 THE EFFECT OF THORACIC DISEASE ON THE CIRCULATORY SYSTEM, Dr. Mahlon H. Delp
12:45 Luncheon
1:30 THE PATHOGENESIS OF TUBERCULOSIS, Dr. Henry C. Sweany
2:30 INDICATIONS FOR PULMONARY RESECTION FOR TUBERCULOSIS, Dr. Jack M. Leopard
3:00 X-RAY DIAGNOSIS IN PULMONARY DISEASE (ROENTGENOGRAM DEMONSTRATION), Dr. Galen M. Tice
4:00 ANAESTHESIA IN CHEST DISEASES, Dr. Paul H. Lorhan

Wednesday, October 22

9:30 THERAPEUTIC METHODS IN ACUTE PULMONARY DISEASE, Dr. Joseph E. Welker
10:00 BENIGN SPONTANEOUS PNEUMOTHORAX (ETIOLOGY, DIAGNOSIS AND MANAGEMENT), Dr. James A. Jarvis
10:30 THE EVOLUTION OF TUBERCULOSIS IN THE HUMAN BODY, Dr. J. A. Myers
11:30 Recess
11:45 THE DIAGNOSTIC VALUE OF ANGIOCARDIOGRAPHY (X-RAY DEMONSTRATION), Dr. J. E. McConchie
12:45 Luncheon
1:30 THE IMPORTANCE OF ACCURATE DIAGNOSIS IN TUBERCULOSIS, Dr. J. A. Myers
2:30 THE ETIOLOGY AND MANAGEMENT OF PLEURAL EFFUSIONS, Dr. Max S. Allen
3:00 BRONCHIECTASIS IN CHILDREN, Dr. Herbert C. Miller
3:30 THE DIAGNOSIS AND TREATMENT OF THORACIC TUMORS, Dr. Paul W. Schafer

Thursday, October 23

9:30 ALLERGY OF THE RESPIRATORY SYSTEM, Dr. Orville R. Withers
10:00 BRONCHOGRAPHY AS A DIAGNOSTIC AID IN PULMONARY DISEASE, Dr. Lewis G. Allen
10:30 COLLAPSE THERAPY IN PULMONARY TUBERCULOSIS, Dr. Karl H. Pfuetze
11:30 Recess
11:45 TUBERCULOSIS IN THE AGED, Dr. Charles F. Taylor
12:15 BRONCHOSCOPY IN THORACIC DISEASE (TUBERCULOSIS, ABSCESS, BRONCHIECTASIS, TUMOR, ETC.), Dr. William B. Barry
12:45 Luncheon
1:30 COMPLICATIONS OF ARTIFICIAL PNEUMOTHORAX, Dr. Harold M. Roberts
2:00 THE TREATMENT OF TUBERCULOSIS WITH STREPTOMYCIN, Dr. Karl H. Pfuetze
3:00 THE SURGICAL TREATMENT OF SUPPURATIVE DISEASE OF THE THORAX, Dr. T. G. Orr, Sr.
3:30 HISTOPLASMIN SENSITIVITY ASSOCIATED WITH PATHOLOGICAL LUNG CHANGES, Dr. Michael L. Furcolow

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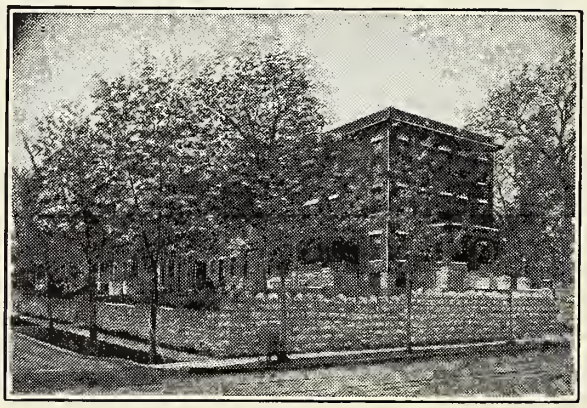
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CANCER DIAGNOSIS BY SMEARS

Wendell A. Grosjean, M.D.

Winfield, Kansas

Almost 20 years ago, Papanicolaou[1] first announced that desquamated cancer cells could be recognized in vaginal secretions. Not again until 1941, when Papanicolaou in conjunction with Traut[2] published an article, is anything found relative to using vaginal smears in the diagnosis of cancer. Two years later these authors published their excellent monograph[3]. Since that time, a number of other investigators, notably Meigs[4,5] and Ayre[6] have published numerous articles and have enthusiastically endorsed the procedure as a diagnostic aid, particularly in early cervical lesions. Papers have also appeared which have shown the diagnostic value of demonstrating exfoliated malignant cells in sputum, urine and contents of the stomach.[7,8,9]

Except in isolated localities, enthusiasm is lacking among the profession at large in adopting these newer concepts as an aid in the diagnosis of cancer. This is partly due to the fact that, as a general rule, we have been taught to make a diagnosis of malignancy only when the normal architecture of tissue has been disrupted and invasion is clearly evident. The morphology of the individual cell has been of secondary importance. Probably another reason for this lack of enthusiasm is unfamiliarity with the procedure, as well as lack of knowledge of its full potentialities. For this reason, it would seem worthwhile to record my experiences with the method during the past 15 months. It should be emphasized that this is a diagnostic aid, and not a procedure to replace the conventional biopsy. Some smears are so conclusive that there is no doubt about malignancy being present; nevertheless, treatment should not be instituted until verified by biopsy except in instances of very early imperceptible cervical lesions (carcinoma in situ). In these cases, several biopsies may be negative because the surgeon failed to get the sample of tissue from the proper area, and the patient would be denied the benefit of treatment at a time when a cure might be assured.

The basis for the procedure lies in the fact that desquamation of normal epithelium occurs constantly and if a neoplasm is present, its malignant cells will also be cast off. As a rule, these cells are shed more freely than normal cells, because they are proliferating more rapidly. They may be recovered from the vaginal and other secretions, and by appropriate staining methods can be identified after one has become familiar with the morphology of malignant cells.

In the group with which I am associated, it has been our practice, since February 1946, to make routine vaginal smears on all new adult females who present themselves for study. Smears are also made on any female who has any menstrual irregularity or any abnormal findings on pelvic examination. A determination of estrogenic activity as well as a search for cancer cells is made at the same time. In addition, prostatic studies are made on all elderly males. All abdominal and pleural fluid is studied and gastric contents from everyone having a gastric analysis is also routinely stained. Sputum and bronchial secretions are studied when indicated.

The value of this procedure lies first in its simplicity, and second in its reliability in locating early and hidden lesions. Early diagnosis is our only salvation in our present state of knowledge concerning cancer. The process of obtaining specimens is so simple that any number may be taken from groups of patients with no inconvenience to them, and large numbers may be screened, making it particularly useful in cancer detection programs.

The reliability of the method may be judged by the low percentage of false positives and false negatives as reported by various workers who have studied large series of cases. Ayre[6] reports a series of 2,320 cases studied in which 202 cases of cancer of the uterus were diagnosed by smear and con-

firmed by biopsy. The average deviation in diagnosis between smear and biopsy was 2.96 per cent. This is fairly representative.

Our own series of cases is hardly enough, as yet, to be of statistical significance. There has, however, been only one instance since this study was begun, that a negative smear was obtained in which the cervical biopsy was positive. This patient was a 25-year-old woman with a small undifferentiated lesion who had had a douche just before coming in for examination. On the other hand, there have been four carcinomas of the cervix diagnosed primarily by smear in which the lesions were early enough that they could have been easily missed. Two were verified at the first biopsy. One was not verified until the second biopsy (Figure 1) and one had had biopsy elsewhere several months before with negative results. (Figure 2.) This patient had no visible lesion and since the smear was so typical of an endocervical lesion, she was treated without further biopsy. This is the only case in which treatment has been instituted without verification of the diagnosis by routine paraffin sections. All advanced lesions have yielded positive smears. There have been no false negatives in carcinoma of the fundus, but there have been two false positives, both of whom showed a hyperplastic endometrium on curettage. It was later found that both had been on stilbesterol therapy.

It should be mentioned that it is not always possible to tell the origin of malignant cells which may be found in the vaginal secretions. Malignant cells from tumors involving the tubes, ovaries or intestines with peritoneal transplants may find their way into the vagina through the Fallopian tubes. Figures 3 and 4 are examples of these.

Vaginal specimens are obtained by inserting a dry, slightly curved cannula with an attached rubber bulb* into the posterior fornix and sucking out some of the contents. If one wishes, a specimen may be obtained directly from the cervical canal, but this entails the use of a speculum. The material is smeared out on glass slides and immediately placed in a solution of equal parts 95 per cent alcohol and ether. This fixes the cellular elements and if necessary slides may be kept in this manner for a number of days before staining. Douching before a visit to the doctor must be discouraged. Urine smears are made by immediately adding one part 95 per cent alcohol to two to three parts of a catheterized urine specimen. If there is a question of a prostatic malignancy, the prostate should be massaged before catheterization. After centrifuging for 10 minutes, the supernatant fluid is poured off and the sediment is smeared with a wire loop onto a slide thinly coated with egg albumin. It is then fixed in ether-alcohol, the same as the vaginal preparation. In some instances, adequate prostatic secretions may be obtained following massage and these smeared off directly on a slide, either with or without albumin and then fixed as above. A thin coating of albumin tends to prevent the material from washing off. Gastric specimens are obtained by recovering the material from a fasting stomach by means of a Levine tube, collected over a period of 15 minutes. Three parts gastric secretions are immediately mixed with one part of 95 per cent alcohol and centrifuged. It is then handled in the same manner as the urine specimen, except that staining must be carried out at once. Pleural and ascitic fluids are handled the same as urine. Sputum may be collected directly into a glass container containing 20 to 30 ccs. of 70 per cent alcohol, preparatory to staining. Recently, I have tried making smears directly from bronchoscopic aspirations, as suggested by Herbut and Clerf[10], and agree that this is a more satisfactory method. After the specimens have been fixed, they are all stained exactly the same, using the Papanicolaou stains and technique[3].

Considerable experience is necessary before one learns to distinguish the many varieties of normal and abnormal cells from the truly malignant cells. This experience can be gained only by practice. In general, malignant cells are hyperchromatic and frequently bizarre in shape. The chromatin in the nucleus is abnormally arranged, and the size of the nucleus in proportion to the cytoplasm is greater than found in normal cells. Vacuolization is common but not pathognomonic. Nuclear changes are of much more importance than changes in the cytoplasm. One should almost never form an opinion from the appearance of a single cell, but should study clumps of two or more cells in which variation in size, shape, and staining reaction of the nuclei will be apparent.

In vaginal smears, one must be suspicious when red blood cells, endometrial cells and histiocytes are found in women beyond the menopause. Polyps as well as injudicious estrogenic therapy may produce these findings, but one should be on the alert for a malignancy in these cases. More often than not, an increase in the number of cornified cells will be found in malignancies.

Every microscopic field must be carefully covered under low power, and when abnormal clumps of cells are spotted, these are then subjected to more detailed study under high power. This takes from 15 to 25 minutes per slide and is one of the chief disadvantages of the method. A technician is now being trained to look over our slides, marking any suspicious areas for further study in an attempt to obviate this disadvantage.

*Manufactured by the Ortho Products Company, Linden, New Jersey.

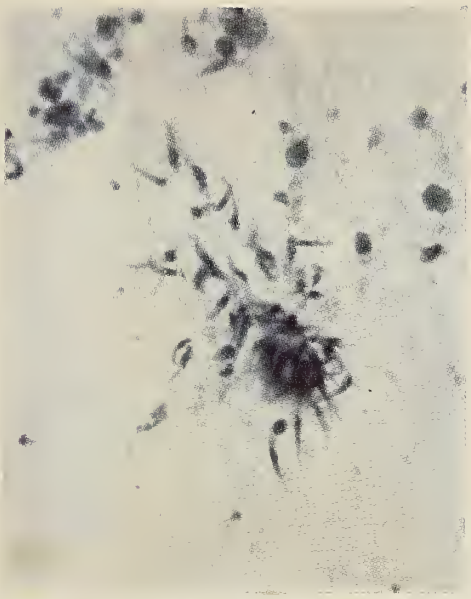


Figure 1. Positive diagnosis from smear. Biopsy of cervix requested which was negative. Repeated in a week and squamous cell carcinoma found. Cervix showed only slight erosion clinically.

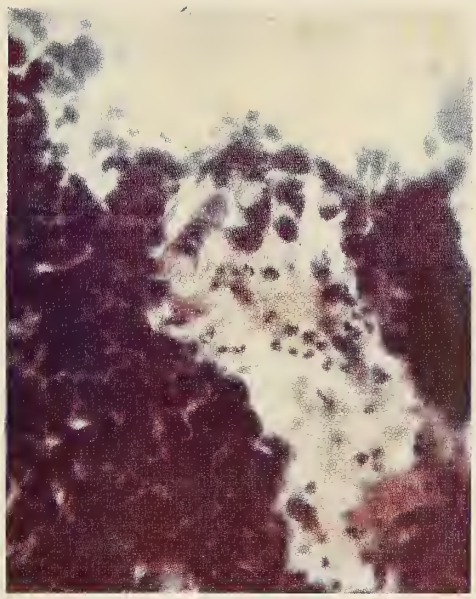


Figure 2. Negative biopsy elsewhere several months before. No visible lesion at present and biopsy not repeated. Evidence conclusive of endocervical carcinoma. The only case in which treatment instituted on basis of smears alone. Symptom: slight spotting on two occasions.

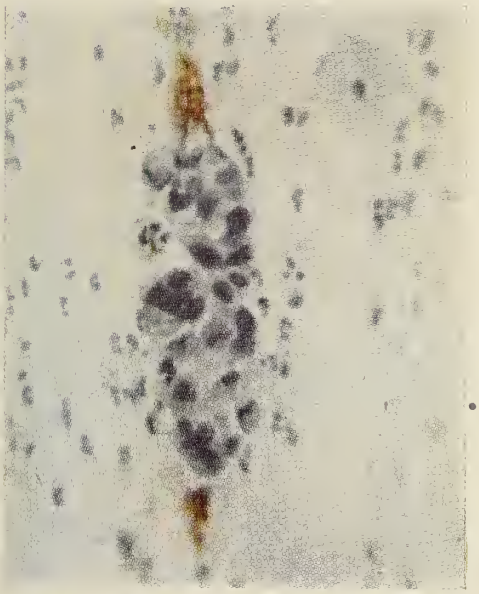


Figure 3. Bleeding in menopausal patient one week before. Examination of pelvis showed enlarged uterus with multiple fibroids. Smears positive on two examinations. Endometrial and cervical biopsy negative. At laparotomy papillary carcinoma of ovary with transplants in omentum found. Also multiple fibroids with calcium degeneration. No malignant transplants on endometrium.

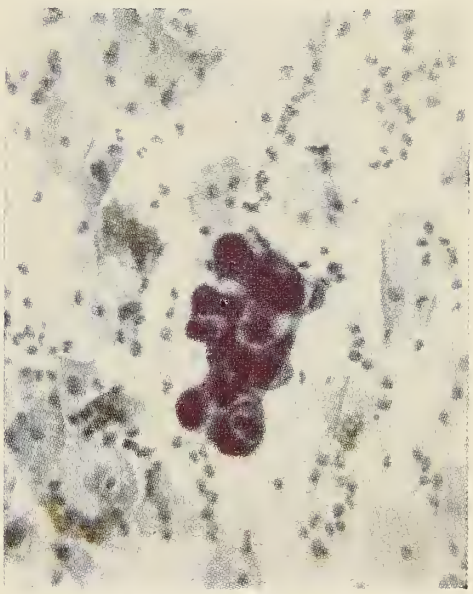


Figure 4. Positive vaginal smears from patient dying of mucoid carcinoma of ascending colon with peritoneal transplants. No malignancy of genital organs.

Of particular interest are cases of carcinoma of the cervix who have had radiation therapy. Evaluation of these cases in the beginning was most difficult because of the effect radiation has on normal cells. This effect consists of the production of many abnormal and bizarre forms which may persist for months, producing a very confusing picture until one becomes accustomed to these changes. An excellent study of radiation effect on the cells in the vaginal secretions has been made by Graham[11]. In another article[12], she has shown that there may be some prognostic value in studying smears from patients during treatment. The study tends to show that those in whom the normal cells exhibit little or no reaction to radiation are not likely to be cured by radiation therapy.

No conclusions can be drawn at present with regard to gastric studies, but on the whole, it has not been too encouraging because of rapid cell disintegration and possibly because many malignant lesions in the stomach are infiltrative in type and do not shed their cells too readily. An attempt is made to overcome cell disintegration by immediately centrifuging and staining the specimen.

The results on studies of ascitic and pleural fluids are uniformly good, as well as the limited number of bronchial studies; however, the most baffling and yet the one with the greatest possibilities is the prostate. Massage of a benign adenomatous prostate will produce an abundance of cast-off cells. Many of these may be abnormal in appearance. One case had many clumps of abnormal appearing cells and a tentative diagnosis of malignancy was made. Viewed through the cystoscope, the lesion appeared to be an ulcerative one which bled easily. Because of uncontrollable hemorrhage from the passage of a catheter, an emergency prostatectomy had to be done. Serial sections of the gland were not made, but 45 blocks were cut and no evidence of carcinoma could be found in any of these.

A diagnosis of malignancy of the prostate must not be made unless there are groups of cells which appear to be crowded with indistinct cell outlines and containing nuclei with a relative increase in size and with abnormal chromatin arrangement. Herbut[13] states that the finding of multi-colored pavement cells is one of the characteristics of prostatic malignancy. I do not agree with this, as I have repeatedly found these cells in both malignant and benign cases when the patients have been taking stilbesterol. I have not found them in any case which has not been taking the drug. Sufficient experience in the study of prostatic secretions should lead to early diagnosis of carcinoma of the prostate which, by other methods, is extremely difficult if not impossible. Kidney as well as bladder neoplasms also shed cells into the urine, so once malignant cells are discovered, a complete search must be made until their origin is found.

CONCLUSIONS

Vaginal smear study by the Papanicolaou method is a valuable adjunct in the diagnosis of cancer of the uterus. It is emphasized again that it is an adjunct in diagnosis, and not a method to replace biopsy. It has particular value in diagnosing early lesions when treatment will be most effective. Because of its simplicity, a large number of patients may be screened with little inconvenience to them. With experience, the interpretation of the smear is quite reliable. Smears made from urine, abdominal and pleural fluid, sputum and gastric contents also offer another aid in cancer diagnosis. Of these, the least promising in the light of our present experience, is the gastric study. As experience is gained, the most potentially promising should be the prostatic secretions from which an early diagnosis of carcinoma might be established.

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Thirty-two Kansas physicians were among a group of 500 attending the Rocky Mountain Cancer Conference in Denver, July 9 and 10, under the sponsorship of the Colorado State Medical Society, the Rocky Mountain Cancer Foundation and the Colorado Division of the American Cancer Society.

RESECTION OF THE CECUM AND RIGHT PORTION OF THE COLON FOR MALIGNANT TUMOR*

Edward S. Judd, Jr., M.D.**

Rochester, Minnesota

Pessimistic viewpoints might be taken in regard to malignant lesions of the gastro-intestinal tract if one is to consider only those of the stomach or esophagus. However, a study of the results of surgical management of carcinoma or other malignant tumors of the cecum, ascending colon or hepatic flexure has shown that perhaps this particular part of the gastro-intestinal tract is as favorable as any could possibly be as regards cure.

At the Mayo Clinic, an exhaustive survey of 885 patients who had malignant lesions of the cecum and ascending colon and who underwent surgical treatment was made by Mayo and Lovelace[1] in 1939. These patients were admitted to the clinic in the years from 1907 to 1938, inclusive; therefore, the very earliest surgical measures were reviewed and even the latest at that particular time seem a bit out of date at the present reading. In that series, 40 per cent of the tumors were located in the cecum and 60 per cent were found in the ascending colon including the hepatic flexure. It is interesting to note that in 33 per cent of the entire series, the surgeons stated that the sole purpose of the operation was not surgical cure of the lesion but was strictly palliation; therefore, this particular group of cases included biopsy, palliative ileocolostomy, cecostomy and ileostomy. In addition, in a small number resection was carried out as a palliative measure even though evidence of some type of spread of the tumor was already present. It is interesting to note that the rationale in the early days is still used by surgeons who care for these people today. All surgeons feel that palliative resection is completely justified when the objective is to obviate impending intestinal obstruction, perforation, intractable pain and inflammatory involvement of surrounding structures or, probably most important of all, the severe anemia which all observers notice with this type of lesion. Dr. C. W. Mayo feels that palliative measures should be extended to an even larger group of patients. Whether metastatic lesions in the liver and other remote points will exhibit a somewhat retarded course following resection of the primary growth is still a question.

In the earlier cases, a wide variety of procedures was carried out, possibly because surgical measures were not particularly standardized and a relatively larger group of surgeons was doing general surgical work. In later years, in treatment of these lesions as in many other types of lesions, the tendency has been toward more standardization of the approach. In the five years from 1935 to 1939, inclusive, the previously rather constant percentage of cases in which operation was performed for cure, in contrast to palliation, was suddenly increased three per cent. It is thought that both earlier diagnosis and improvements in preoperative and postoperative care brought this about. It is certain that since 1939, the increase has been even greater. The general study of the patients as a group is beyond the scope of this paper but certain factors which are worthy of mention have been stressed recently in the constant attempt to extend the operation to more and more patients and to achieve cure in a larger number of cases.

Preoperative preparation is certainly one of the most important factors. The brilliant work of the Johns Hopkins group on preoperative preparation of patients with sulfonamides has been corroborated in clinics too numerous to mention. The local implantation of sulfonamides in the peritoneal cavity was attended by a drop in the mortality and morbidity figures. Up until this time, it had been the practice at the Mayo Clinic on several of the surgical services to employ a preoperative vaccination of the peritoneum with an especially prepared vaccine. This procedure was held in some question throughout the years by many contemporary surgeons, including some at the clinic. The great difficulty in establishing complete control to evaluate the efficiency of the measure made its general acceptance somewhat questionable. At present this type of vaccination has been abandoned. In very recent years, it has been anticipated that the drop in statistical figures produced by intraperitoneal use of sulfonamides will be more marked because of the thorough preoperative preparation of the patient with sulfasuxidine (succinylsulfathiazole) and sulfathalidine (phthalylsulfathiazole). Complete figures will not be available for a short time but it may be that the irreducible minimum has been approached. The point at present is that with a thorough preparation with sulfasuxidine or sulfathalidine a one-stage procedure is being extended to a much larger

*Read at the meeting of the Kansas Medical Society, Topeka, Kansas, May 13-15, 1947.

**Division of Surgery, Mayo Clinic.

group of patients. The results, therefore, have been far more satisfactory. These factors must be considered in computing new mortality or morbidity figures on long-range charts.

DIAGNOSIS

The symptoms and signs of carcinoma of the colon, especially of the right half, are too well known to be discussed further at this time. One fact to be re-emphasized is that in many cases no symptoms or signs occur to draw attention to the right portion of the colon. One feature which Dr. C. W. Mayo has noted repeatedly in these cases is the history of an appendectomy performed when symptoms were present which later were found to be due directly to the presence of a malignant tumor in the cecum or right part of the colon. This is less surprising when one recalls that a definite degree of appendicitis will result from obstruction of the cecum. If a small incision had been employed for the appendectomy and no further exploring carried out, it is entirely possible that an early carcinoma was overlooked. In Lovelace and Mayo's series, it was found that 15 per cent of the patients had undergone appendectomy a very short time prior to the diagnosis of carcinoma of the cecum or right part of the colon.

One factor which I wish to stress is the anemia which so often accompanies these tumors. Frequently anemia is the only presenting symptom and it is only by exhaustive study that the location of the tumor is finally established. As early as 1913, Dr. W. J. Mayo called attention to the profound anemia he had observed so often in this type of case. Again in 1921,[2] he advanced the statement that malignant tumors in that region appeared to produce anemia in a higher percentage of cases than any other type of carcinoma with the possible exception of some tumors of the stomach. He frequently cautioned clinicians and younger surgeons that the hematologic picture might strongly resemble that of a primary type of anemia.

Alvarez and his colleagues[3] were stimulated to attempt to explain why there should be such a great difference between the anemia in cases of carcinoma of the right part of the colon and that of more distal points in the gastro-intestinal tract. They found a difference in the surface area of the tumors. The average area of tumors of the right portion of the colon was 51.6 sq. cm. while the area of tumors of the sigmoid was only 31.2 sq. cm. The wide discrepancy in the diameter of the colon at these two points was taken to be a very important factor in this variation of the surface areas. The size of such an area, all or part of which might be markedly ulcerated. is suggestive that anemia should be the rule rather than the exception.

Welch, Mayo, and Wakefield[4] were stimulated to further study of the anemia. It had been suggested to them that the terminal portion of the ileum might contain the clue to the situation; however, after study of the mucosa in that particular segment of the small bowel they concluded that it could not be explained on the basis of atrophy or infiltrative change. The suggestion that some antianemic principles might not be absorbed in this type of case certainly could not be proved by their study and they were forced to decide that in all probability the anemia resulted from loss of blood either by repeated gross hemorrhages or by a constant so-called silent type of bleeding.

At the clinic we have learned to rely heavily upon the roentgenologists for the proper diagnosis of these tumors. In the instance of actual or impending obstruction, we do not employ barium for the studies. Occasionally we prefer to perform laparotomy rather than to risk producing actual intestinal obstruction from the injudicious use of barium. The percentage of multiple growths in the large intestine is high enough so that even when a well-established diagnosis of tumor arising in the colon is made, the surgeons palpate the entire large intestine at the time of laparotomy to be certain that no other lesion is present. However, the reliability of roentgenologic examination is now so high that other lesions are almost never found at operation when unsuspected preoperatively except in those cases of carcinoma of the rectum and rectosigmoid in which the diagnosis was made by proctoscopy only. In these cases use of barium is avoided for the reasons already suggested and the diagnosis of tumor of another part of the large intestine will be made during the laparotomy.

PREOPERATIVE CARE

As has been mentioned, perhaps no single influence on the results of the excision of the cecum and right half of the colon is more important than the adequate preoperative preparation of patients. This varies in different clinics throughout the country. Following the valuable study of the Johns Hopkins group and others in the attempt at disinfection of the bowel content by oral administration of sulfasuxidine and sulfathalidine, some argument arose as to whether the time-honored method of purging the bowel prior to operation might not be discarded. It was felt that if laxatives and purges were employed, the drug administered by mouth would be hastened through the intestinal tract so quickly it would not be effective at the desired point. Others argued that purges should be given first because the presence of solid fecal material seemed to lend a culture medium for the growth of bacteria which could not be overcome by any

means. Our present program is perhaps a combination of these two.

Following the diagnosis of carcinoma of the cecum or right portion of the colon, the patient is hospitalized immediately. Dr. C. W. Mayo frequently has stated that this condition might be classified as semi-emergency. He feels that at some one moment in that patient's life if delay is encountered, the tumor may pass from an easily curable, well-localized one to a metastasized, compromising one. The usual preparation of the patient immediately upon admission to the hospital is the oral administration of four fluid drams (16 c.c.) of a mild laxative, phospho-soda. This is given twice daily until about 36 hours prior to the operation. The colon is irrigated immediately with the patient in the knee-chest position and the irrigating solution is employed under some pressure. Sulfasuxidine is now routinely added to the irrigating solution. From the time the patient enters the hospital he is given a residue-free solid diet. He is encouraged to drink a large volume of liquids and he is allowed to eat candy and other sweets to maintain an adequate glycogen content. Immediately upon admission, he is given four gm. of sulfasuxidine. This dose is given every two hours until four doses have been given. Thereafter four doses are given each day. In some centers it is felt that administration of the drug should be continued for from five to seven days. Evidence at hand at present reveals that it should be continued for at least 72 hours. Whether prolonging administration beyond that time adds any further protection is difficult to prove. It is known that the amount of intestinal flora is tremendously reduced by the end of the third day as evidenced by the decrease in the number of Escherichia coli. It is felt that little is gained by delaying operation after the third day.

Proper making of stool cultures is still a most complicated procedure, as is also the careful control of the bacteriologic factor. Recent reports have indicated that streptomycin will reduce the bacteria flora more completely and more quickly than any other drugs but this has not been employed widely as a preoperative measure at present. A dose of sulfathalidine has been stated to be twice as effective as the same dose of sulfasuxidine. It is administered in exactly the same way and in many clinics is the drug of choice. Because we do not have a large series of patients who have received sulfathalidine, we cannot compare the two drugs.

It must be pointed out that untoward effects have been observed in cases in which these drugs have been used. They do not seem to be nearly as common or severe as those formerly observed when large doses of sulfathiazole and other sulfonamide drugs were used; however, if the patient is sensitive to sulfonamides, some degree of response will be noted. Effects include rash, febrile reaction and others. It appears that some people just cannot take sulfasuxidine since it seems to break into its several radicals within the intestine with the result that might be expected. In these cases, once the sensitivity is demonstrated, no further attempt is made to use sulfonamide drugs.

The frequent use of blood transfusions is gaining in favor with all surgeons. It has been proved repeatedly that no substitute for whole blood is adequate. Blood carefully matched as to type and Rh factor is employed whenever any indication exists. Blood plasma and protein preparations such as amigen and protein hydrolysate are used as they seem indicated. Because of the recent reports of hemolytic serum jaundice following the wide use of blood plasma during the war and immediately after, plasma is not used as widely as it once was.

Study of blood chemistry usually is not required beyond the estimation of renal function by calculation of the blood urea. However, if a tendency to intestinal obstruction has been noted, complete studies of the blood chemistry are carried out.

In cases in which obstruction has existed, preoperative intubation with the double lumen tube has proved of some value. The hazard of resection in the presence of obstruction, no matter how slight, has been demonstrated repeatedly. Preresection decompression of the cecum and right portion of the colon by means of appendicostomy or cecostomy has almost never been used since the proper use of nasal tubes was introduced.

The preoperative use of vitamins is one other feature which is difficult to evaluate. Vitamin K certainly should be supplied to any patient who has a tendency to bleed. The other vitamins frequently are administered to leave no stone unturned, but their exact effect remains to be demonstrated.

The day prior to operation the bowel is put at rest by the administration of paregoric. Sulfasuxidine is administered at least up until midnight of the day before operation and frequently beyond that point. After midnight the patient is allowed just enough water by mouth to ingest the medication comfortably.

ANESTHESIA

The choice of anesthesia is left to the surgeon. For those persons who are not particularly anemic, spinal anesthesia has proved to be of definite service. For a slender patient who has a small tumor and no complications, a single dose spinal injection of procaine hydrochloride or another anesthetic substance frequently will be completely adequate. Pentothal sodium administered intravenously will allay the psychologic trauma which accompanies any large operation and has been observed

to minimize the degree of shock occasionally. The drug used for spinal anesthesia may be administered by means of the continuous injection technic. The use of a small initial dose with the addition of supplementary doses as required will maintain a steady degree of relaxation. Recently, more emphasis has been placed on inhalation anesthesia, especially in cases of rather severe anemia. The best combination appears to be nitrous oxide, ether and oxygen. An intratracheal tube frequently is employed. Recently, I operated on an elderly, severely anemic man who had a large tumor. He had had repeated episodes most suggestive of coronary occlusion. Ethylene was the only anesthetic agent used in this case and the results were highly gratifying.

OPERATION

The incision also is a matter of choice. A right rectus incision just large enough to admit the examining hand is very effective. When abdominal exploration is completed, the incision may be extended in either or both directions to accomodate the surgeon. Should extensive metastatic lesions be discovered, the incision can be closed quickly without jeopardizing the patient. Should an inoperable obstructing lesion be found, side-to-side ileocolostomy may be performed through this same small incision. Dr. C. W. Mayo has routinely employed an incision through the lateral aspect of the rectus sheath, retracting the rectus muscle medially without dividing its fibers. Occasionally a transverse incision or a transverse extension of the vertical incision is used. These incisions are especially useful in high-lying tumors involving the hepatic flexure. When the tumor has been identified, the remainder of the large intestine palpated, the state of the liver determined, the presence or absence of any metastatic lesion in the mesentary or adjacent structures confirmed or disproved, the surgeon is ready to decide what type of procedure he will employ.

A wide variety of procedures was popular until recently. It appears now that these variations are being limited to a few. Until rather recently in the Lahey Clinic, it was almost routine to remove the terminal portion of the ileum, the cecum and right half of the colon, leaving the ends of the intestine out of the wound in the modified Mikulicz's manner, as the first part of a two-stage procedure. The loops of bowel were approximated by suture to create a proper spur for the future application of crushing clamps. This operation obviated the threat of leakage at the point of primary anastomosis. It was employed in other clinics in cases in which obstruction could not be relieved by other means. One great disadvantage in this operation is the copious discharge of the highly irritating liquid contents of the small bowel upon the abdominal wall. Crushing clamps may be applied very soon after operation so that the stoma may be closed at the earliest possible time. The operation seems to have a limited use at present in the so-called emergency situation, but with the preoperative preparation that is now possible, primary anastomosis appears to be used far more widely. Recent bulletins from the Lahey Clinic[5, 6] have indicated that primary anastomosis is being carried out far more frequently. The ends of both the large and small intestine are closed and side-to-side anastomosis is performed.

The choice between a closed anastomosis and an open one once again depends primarily upon the experience the surgeon has had and secondarily upon the results that have been realized in those clinics with which he is familiar. In the one-stage operation we at the clinic prefer end-to-end anastomosis. The resection is started by a wide incision of the lateral peritoneal attachment. Gauze dissection from the lateral aspect will free the entire cecum and right portion of the colon quite quickly and easily and will demonstrate the retroperitoneal part of the duodenum immediately as the hepatic flexure is approached. The right ureter and kidney are ordinarily evident at once and all of these structures can be packed out of the way to avoid damage. The spermatic or ovarian vessels, as the case may be, will become apparent at this stage of the dissection. The blood vessels to the terminal part of the ileum can be brought under direct vision. Under a strong light the exact location of the vessels will be demonstrated. The ileocolic and the right colic vessels can be ligated securely at their lowest point affording a wide area for resection of the mesentery, bearing the lymph nodes and lymphatics. By triangular or wedge-shaped incision of the mesentery, one is assured of taking only those blood vessels that are necessary for the wide resection of the colon.

In the open type of anastomosis which we have employed to good advantage, rubber-shod blocking clamps are applied in a transverse fashion to the transverse colon and in an oblique fashion to the ileum. The slant on the ileum is away from the mesentery. This method of cutting the terminal part of the ileum provides the bowel a wide lumen and at the antimesenteric border the blood supply is adequate. Following amputation of the bowel, the open ends of intestine are swabbed thoroughly with an antiseptic solution and the entire field is redraped carefully to prevent soiling. We routinely determine whether the blood supply is adequate not only by observing the color of the bowel and the visible pulsation of the arteries, but also by either incising a small blood vessel to watch for arterial bleeding or, as is more commonly the case, by releasing the rubber-covered blocking clamp for a

few moments to observe the free bleeding of the entire bowel edge.

Two rows of sutures are all that are needed for the anastomosis. Frequently, the outer row consists of interrupted stitches so that any tendency to the late development of stricture will be obviated. The patency of the stoma is tested with the thumb and the stoma should admit the thumb very easily in most cases. In many cases, it will be considerably larger than this. Where possible the suture line is protected by omentum or fat tags. The incised border of mesentery then must be sutured together completely to obviate any possible opening for internal herniation of the small intestine. Then usually the lateral and posterior peritoneum can be closed unless extremely wide incision has been necessary in this area. Occasionally, it will not be necessary to do this if it means prolonging the operation unduly, if the tension is too great or if too little peritoneum remains. We usually employ drains and these can be brought out posteriorly and extended to this part of the suture line or they may be brought up from the lateral peritoneum and through a stab wound lateral to the incision. We feel that the drains should be kept in place for at least 10 or 12 days.

The drapes are changed once again and the gloves of the surgical team are replaced with fresh ones. From 5 to 10 gm. of sulfathiazole powder is inserted about the anastomosis and operative site. The omentum is redraped in the usual fashion and when the peritoneum is almost completely closed, it may be advantageous to inject a solution containing 100,000 units of penicillin into the cavity even though Penrose drains are used. The wound is closed in layers, preferably with interrupted sutures. It may be well to suture the Penrose drains to the skin to prevent their being extracted unintentionally during changes of dressing.

At the conclusion of the operation we have found that completely paralyzing the anal sphincter by manual dilatation will prevent trapping of gas in the lower segment of the colon and rectum for a period frequently lasting for 10 days. This has been so uniformly successful that the procedure has been extended to many other types of operations as well.

POSTOPERATIVE CARE

It is well to administer at least 500 c.c. of blood soon after completion of the operation. We have observed that it is far better to make this a routine practice than to procrastinate and deny the blood to those patients who actually need it without exhibiting early signs of its need. The greatly reduced incidence of postoperative shock, the immediate feeling of well-being on the part of the patient and the improved early postoperative course as evidenced by a lower pulse rate and a more adequate immediate urinary output are all indications for blood transfusions soon after operation.

We do not hesitate to employ oxygen if the patient shows any signs of air hunger, elevated pulse, slight degree of shock or unusual color of the skin. Next 1,000 c.c. of a five per cent solution of dextrose in distilled water is administered intravenously. Immediately about 2,000 c.c. of saline solution is given subcutaneously. It is allowed to drip slowly throughout the first 24 hours. Morphine is supplied if needed for comfort during the first 24 hours but use of this drug is diminished as rapidly as possible. It is rarely necessary to give it after the second or third day. The patient is not given anything by mouth until the passage of flatus has been definite. By the second evening it is well to administer glycerin suppositories and then insert a rectal tube which should be left in place for a half hour. This performance is repeated every three or four hours. Gas is released much more completely by this than by the natural means.

Decompression of the stomach by means of a nasal tube is employed frequently as a prophylactic measure. Surprisingly large amounts of fluid have been withdrawn from the small intestine in the first 24 hours. The advantage of decompression is that it eliminates the swallowed air which, as Wangensteen and Rea[7] have clearly demonstrated, comprises 68 per cent of the intestinal gas. Unless distention, hiccoughs, nausea or actual vomiting occurs, the nasal tube can be withdrawn after 24 hours and the patient usually has profited a great deal more than patients not given the benefit of this prophylactic measure.

When flatus can be passed freely by rectum, usually on the third day, one fluid ounce (30 c.c.) of water is offered to the patient every hour. This amount is increased fairly rapidly. A liquid diet may be started as tolerated and very shortly a non-residue solid diet is given and continued until at least the eighth day. From the eighth day, if the bowels are moving properly, a low-residue solid diet is usually adequate for the remainder of the stay in the hospital.

Postoperatively administration of sulfasuxidine is started as soon as the patient is able to take water by mouth. The drug is given in full-sized doses and usually does not upset the patient in any way. In addition to contributing to disinfection of the content of the bowel, sulfasuxidine has a gentle laxative effect and frequently insures several soft stools each day. No additional laxative is needed.

The patient is allowed out of bed as soon as he feels able. This frequently will be as early as the second or third day and almost always before the

fifth or sixth day. The dressing is changed as necessary. It has been found that the fairly liberal drainage of serum the first few days usually diminishes rapidly. The drains are left in place at least until the 12th day and if necessary they are left longer. Postoperatively vitamins, iron and proteins are administered as indicated. The patient is allowed to leave the hospital when the wound and general condition permit, usually between the 11th and 16th day.

The complications are those that might be expected after any type of colonic operation, and I might add that the incidence appears to be greatly reduced by the preoperative and postoperative measures now used.

MORBIDITY AND MORTALITY

In regard to morbidity, it goes without saying that the one-stage procedure has a distinct advantage over any other operation in many respects, not the least of which is the psychologic well-being of the patient. Lovelace and Mayo's review was undertaken prior to the days of routine intraperitoneal use of sulfonamides, and the operations were all performed long before the advent of sulfasuxidine and similar derivatives. They found that in the large series of cases in which the one-stage procedure was carried out the average hospital stay, regardless of what type of anastomosis was used, was 21 days. Today this average would be closer to 12 or 14 days. The average period of time in the hospital for the patients who underwent two-stage resection was 45 days. The concomitant difference in expense and all other factors which always must be considered in the patient's welfare is an obvious feature. I believe it is safe to say that today the two-stage procedure is largely a thing of the past. Most surgeons at the clinic feel that any lesion of the right part of the colon which can be removed can be removed in one stage. The extraperitoneal type of resection probably is best reserved as a so-called emergency operation.

In Lovelace and Mayo's series of 885 cases encountered from 1907 to 1938, inclusive, the gross hospital mortality rate was 23.5 per cent. This series included those cases in which only a palliative procedure was carried out, in addition to those in which resection was performed with hope of cure. All deaths in the hospital were included regardless of cause of death or the time that had elapsed after the operation. It is interesting to compare figures for that series with those recently prepared by the Division of Biometry and Medical Statistics at the clinic. From 1940 through 1946, 442 patients who had malignant tumors of the cecum and right portion of the colon underwent resection. All types of resection are included. The over-all hospital mortality was 18 (4.1 per cent). Of this group, 325 patients underwent the one-stage procedure. Ten (3.1 per cent) of these died in the hospital. The mortality rate for the one-stage operation is probably somewhat lower because the patients who are not the best risk and perhaps could not be prepared properly underwent the two-stage operation.

During this same interval, on Dr. C. W. Mayo's surgical service, the one with which I am most familiar, 51 of the 325 patients underwent the one-stage procedure including end-to-end ileocolostomy as described previously in this presentation. One of these, an 82-year-old man, died in the hospital. The hospital mortality rate in this small group was, therefore, two per cent.

Further analysis of the other cases in which the diagnosis of malignant tumor of the cecum or right part of the colon was made is very interesting. In this same interval 134 patients were operated upon with that diagnosis, but the lesion was not removed for various reasons. In this group 18 patients underwent ileocolostomy as a first stage of what was hoped might be a two-stage procedure. Eight of these patients died in the hospital, a mortality rate of 44.4 per cent. For various reasons other patients who survived the first stage could not undergo the second procedure.

At the same time in 90 cases ileocolostomy was performed purely as a palliative measure as it was obvious from the outset that no further surgical treatment could even be attempted. It is surprising to note that only six (6.7 per cent) of these died in the hospital. The exact reasons for this discrepancy are a bit obscure. Two very important explanations could be made, although they are by no means the entire answer. First of all, the lesions found following the incision most probably were so obviously inoperable that no dissection of any type was carried out and side-to-side ileocolostomy was established quickly and simply and nothing further was attempted. Second, it is entirely possible that freeing of the lesion led to some leakage of the intestinal content or at least stirred up some dormant infectious process and fatal peritonitis resulted. When it was found that nothing could be done, the patients were undoubtedly sent home as quickly as possible to reduce the expense to and mental anguish of the patient and his distressed relatives. Perhaps these patients died soon after they went home. In contrast, those people who underwent anastomosis as a possible first-stage procedure may have been kept in town for a prolonged interval on medical therapy, dietary regimen and such measures with the hope that the condition would improve to the point where resection might be carried out later.

During these same years, 26 abdominal explora-

tory operations were performed for malignant tumors of the cecum and right portion of the colon and the situation appeared so hopeless that nothing further was done. One death occurred in the group, a mortality rate of 3.8 per cent.

The summary of these interesting figures shows that in the 576 cases in which surgical treatment was given, the lesion was removed in 442 (76.7 per cent). This is a very satisfactory figure and undoubtedly represents the culmination of many years of study and effort on the part of not only surgeons but also of diagnosticians and bacteriologists. It remains to be seen whether this resectability rate can be increased still further.

As to the late results of resection of these lesions, there might be some confusion in the interpretation of the figures. It has been the practice at the clinic to prognosticate on the basis of several factors. The Broders classification (in which the grade one represents the most differentiated type of lesion and grade four the least differentiated type) is still used as a very convenient method of at least partially classifying the lesions. In addition, we routinely employ the Dukes classification in which the type A lesion is confined to the mucosa itself, the type B is beginning to extend through the serosa and type C represents metastatic spread beyond the intestinal wall to the lymph nodes and other structures. It would be expected that a tumor of low grade according to Broders' scale and type A or B of Dukes' classification would have the more preferable outlook. Careful analysis has proved this to be the case.

In Lovelace and Mayo's series, it was found that by far the greatest percentage of these lesions fell into grade one or two of Broders' classification. This is consistent with all of the studies made in recent years. It sharply contrasts with most of the studies on malignant tumors of the stomach which, in a distressingly high percentage of cases, are usually grade three or four lesions.

The present figures reveal that of the lesions removed from the cecum and right portion of the colon, from 60 to 65 per cent are of the first two grades of malignancy. Again in Lovelace and Mayo's study, metastatic involvement of the lymph nodes was noticed in 28 per cent of the total number of cases. They found that the higher the grade of malignancy, the higher the percentage of the cases in which the lymph nodes were involved. Metastatic lesions in the liver were reported by various surgeons in only 10 per cent of the cases.

The survival rates then can be determined only by actual questioning of the patients or their friends and relatives over a period of years. Lovelace and Mayo made every effort to trace all of the patients. The routine type of letter was sent first and then other letters were sent if they did not receive an answer. In addition to this, local health departments and bureaus of vital statistics were called upon to attempt to trace records of death. Amazingly a follow-up record of 99 per cent of the patients who were operated on five or more years before the study began was obtained. They calculated the five-year survival rate only on the basis of those patients who were dismissed to their homes following operation; in other words, operative mortality was omitted from the final follow-up study. Of the patients who underwent resection of the colon as an attempt to cure the condition, 302 survived the operation and were dismissed to their homes.

At the time of Lovelace and Mayo's analysis, it was most encouraging to find a survival rate of 57 per cent at the end of five years in the group in which resection was performed. It is even more remarkable that 25 per cent of these patients were alive at the end of 20 years. Therefore, it is not without foundation to express a view of optimism in the surgical resection of lesions of this type.

Recent personal discussions with Dr. C. W. Mayo revealed that other interesting sidelights have been brought out by a newer study which will be published soon. One of the outstanding things revealed by this study is the fact that some of the patients who underwent a purely palliative procedure in earlier years are still alive and apparently well at the end of five or more years. In many of these instances, the result of biopsy was negative or biopsy was not performed. The assumption is that the lesion was granulomatous and subsided following some type of short-circuiting operation. These factors must always be kept in mind in attempting to analyze any comparative figures on the cure of malignant tumors.

In general, it appears to be completely reasonable to expect five-year survival in a large percentage of cases of low-grade lesion without evidence of spread beyond the bowel.

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FOLLOW-UP PROCEDURE ON CASES AND SUSPECTED CASES FOUND IN MASS X-RAY SURVEY*

Hilbert Mark, M.D.**

Minneapolis, Minnesota

In past times the differential diagnosis of chest conditions confronted the clinician after the patient reported to him because of some outward sign or symptom which, in many cases, resulted from the chronicity of the disease. The presence of specific signs and symptoms simplified the clinician's task immeasurably. Even then, with the aid of laboratory tests, many diagnoses were made by means of elimination. That was diagnosis of the sick and the diseased.

Today through the use of photofluorographic mass chest x-ray equipment, public health and sanatorium personnel are x-raying the apparently healthy population by the thousands. Evidence of disease, in most instances, is at first limited to the x-ray impression. The examinee notified of the presence of some pathological finding returns to his physician somewhat baffled as to why there should be some findings when he feels so well.

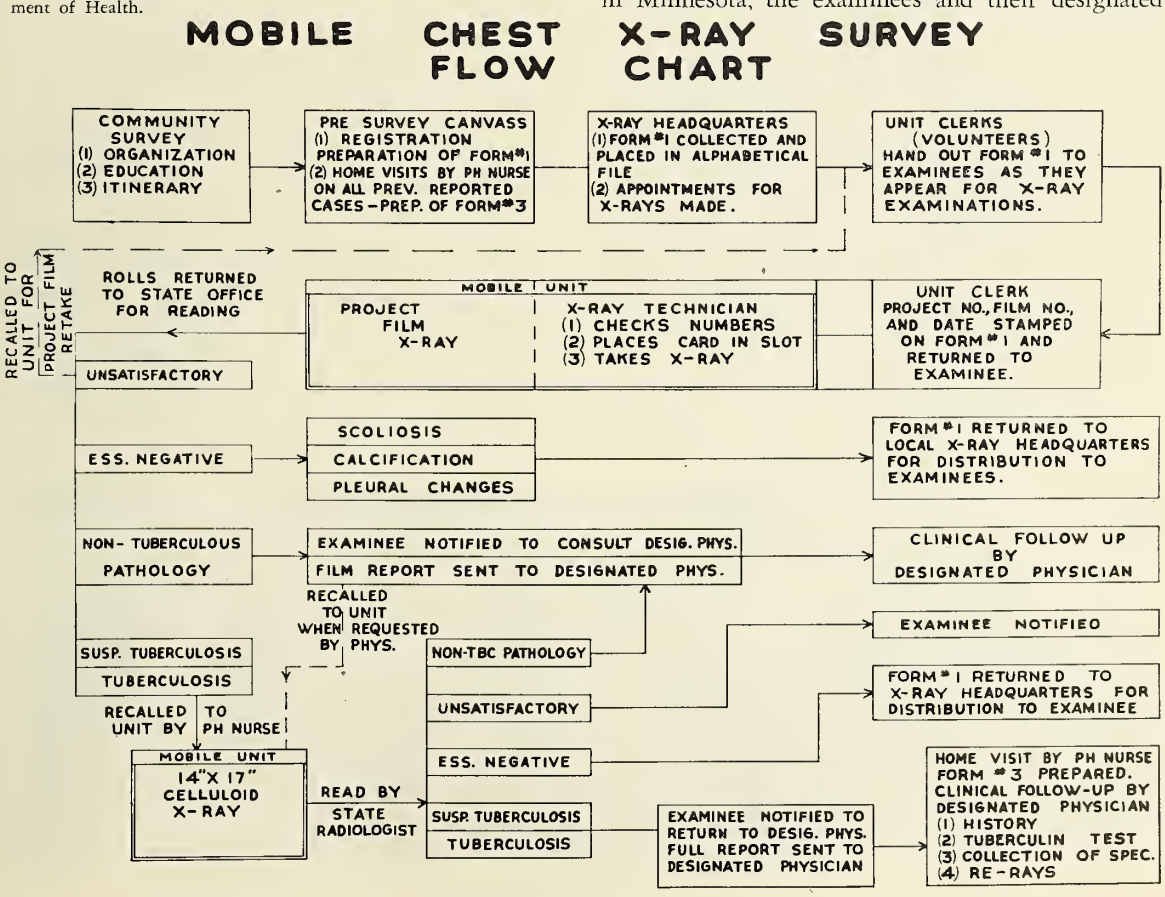
Here the clinician is confronted with diagnostic problems without presence of any suggestive symptoms. He must therefore depend upon signs and laboratory tests to assist him in his search for the etiological diagnosis. This then is diagnosis in the apparently healthy.

It therefore follows that the private practitioner, to whom all cases are referred, forms the bridge between mass chest x-ray screening and ultimate followup and disposition. The x-ray screening is a comparatively easy procedure since one experiences very little difficulty in examining at least 80 per cent of any community. The follow-up, however, may prove to be more difficult especially if the patients are required to return to their physician for more than one visit. Yet this is most important both to the individual and his community.

In the administration of mass chest x-ray surveys in Minnesota, the examinees and their designated

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**Acting Director, Division of Tuberculosis, Minnesota Department of Health.



physicians are notified of the results as shown in Chart I. It is the responsibility of the public health personnel to do everything possible to get the patient to his or her physician initially. Once there the private physician has the entire responsibility of clinical evaluation and diagnosis. If tuberculosis is found, then he has the additional responsibility of determining activity and infectiousness. The prompt and adequate examination of the referred case is the "first" must of the clinician.

The interpretation of abnormal x-ray findings is not an easy task. We are now seeing many hundreds of conditions which, by x-ray alone, could be classified, on single film, as one of a number of diseases. The clinician must be prepared to utilize all available diagnostic procedures to determine the etiological cause before the symptoms appear. The original diagnosis is not always infallible and should be changed if subsequent examinations warrant a more accurate diagnosis. Survey films are "spot" examinations.

Chart II shows a number of pulmonary conditions which may at some stage or another simulate the x-ray findings of pulmonary tuberculosis. Atypical tuberculosis may cast shadows characteristic of other pathology.

In lobar pneumonia, there may be lesions very characteristic of a tuberculous infiltration and cavitation since the pneumonic consolidation is not always uniform. The absorption does not occur at the same rate in all parts of the consolidated area with a result that the x-ray appearance of the shadows is mottled. Variations of aeration simulate cavities. Rapid clearing of these lesions is characteristic of pneumonia.

In bronchopneumonia, the soft, mottled shadows appear in one or more lobes, and if the lesion is confined to the upper lobe then the simulation is greater. However, when only one lobe is affected it is usually the lower. Bronchopneumonia usually clears in ten days to three weeks.

In bronchiectasis, in some instances tuberculosis may produce areas of localized bronchiectasis.

CHART II
PULMONARY PATHOLOGY
Some of the Conditions Which May Simulate Tuberculosis

- Chronic bronchitis
- Pulmonary emphysema
- Streptococcic infections
- Undulant fever
- Lymphoblastoma of the lung
- Mediastinal tumours
- Pulmonary amebiasis
- Pulmonary trichiniasis
- Actinomycosis
- Blastomycosis
- Sporotrichosis
- Streptothricosis
- Coccidioidomycosis
- Aspergillosis
- Histoplasmosis
- Chronic interstitial pneumonitis
- Influenza
- Lung abscess
- Pulmonary congestion
- Tularemia
- Bronchiogenic carcinoma
- Pneumoconiosis
  - silicosis
  - siderosis
  - anthracosis
  - asbestoidosis
  - bagassosis
- Non-specific fibrosis
- Hydatid disease
- Atypical pneumonia
- Bronchopneumonia
- Bronchiectasis
- Pulmonary syphilis
- Vascular lesions
- Psittacosis
- Carcinomatosis
- Foreign bodies
  - metallic bodies
  - organic substances
- Sarcoidosis
- Loeffler's syndrome
- Pulmonary infarcts
- Pulmonary distomiasis
- Cystic disease
- Lobar pneumonia
- Bronchiolitis
- Accessory nasal sinus disease

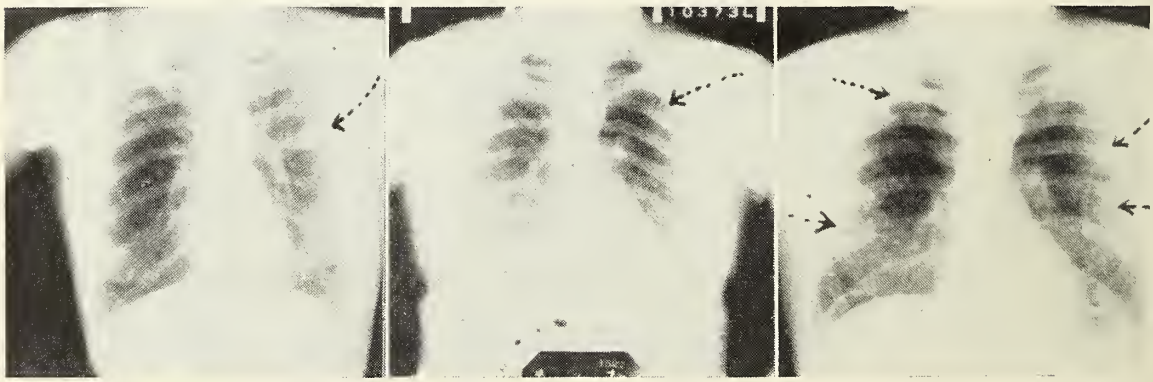
In streptothricosis, sporotrichosis, and leptothrix infections, differentiation by x-ray is impossible in the diffuse type.

In syphilis of the lung, this is a rare type, but when it occurs the error comes from diagnosing syphilis as tuberculosis.

In the neoplasms, the obstruction to a bronchus produces a density which may lead to a diagnosis of tuberculosis. In infiltrating types of carcinoma, the differentiation is not so easy.

In influenza, there may occur a hilar peribronchitis with a tracheobronchial or bronchopulmonary pneumonitis, single or multiple, in small patches around the terminal bronchioles. One may also observe a pulmonary interstitial fibrosis.

In chronic bronchitis and pulmonary emphysema, it is necessary to differentiate between this condition and chronic productive tuberculosis.



Case No. 1 Case No. 2 Case No. 3

In sarcoidosis, there may be a miliary or nodular type of infiltration. The enlargement of the hilar nodes and the extensive pulmonary lesion without symptoms are characteristic.

It is unwise in present day case-finding programs to be indifferent to the existence of non-tuberculous pathology, no matter how rare the condition may be. Conversely, it is equally wrong to ignore the chance of an atypical tuberculous lesion. The records of cases hospitalized in sanatoria as tuberculous in whom there was not even a tuberculous infection and of cases cared for in general hospitals, institutions, and at home as non-tuberculous in whom there exists extensive active pulmonary tuberculosis are too numerous to ignore.

In a review of 40,000 consecutive project films and of the 14 inch x 17 inch celluloid film retakes there were revealed 623 cases of abnormal pulmonary findings. This number is exclusive of the healed primary complexes and cardiac cases.

Chart III shows the listing of the impressions obtained from the survey x-ray films.

CHART III

Abnormal Pulmonary Findings on Survey X-rays. Results from 40,000 Consecutive Survey Films Minnesota

Findings	*No.*	*Findings*	*No.*
Definite Tbc.	204	Incr. B.V. Markings	7
Primary Tbc., active	4	Pulmonary Cyst	2
Silicosis with Infect.	2	Linear Atalectasis	2
Suspect Tuberculosis	66	Bronchitis or Asthma	1
Elev. Diaphragm	9	Diagnosis Deferred	21
Herniation of Diaph.	1	Fibrosis	5
Eventration of Diaph.	8	Diffuse Mottling	2
Pleural Changes	134	Sarcoidosis	3
Pleur. with Effusion	6	Pneumonia	8
Foreign Body, Chest Wall	2	Old Empyema	2
Numerous Calc.	28	Bronchiectasis	8
Multiple Nodules	3	Emphysema	22
Densities, Diag. Def.	50	Possible Ca.	3
Suspect Silicosis	2	Mediastinal Mass	5
Large Hilar Shadows	5		
Total Abnormal Pulmonary Findings		623	1.5%
Cardiac Pathology		276	0.7%
Total Significant Chest Pathology		899	2.2%

Out of this group of 623 films with some abnormal pulmonary findings, a few are shown here to illustrate some of the shadows found on the survey films. Some have characteristic shadows, but in others there is still a question of an etiological diagnosis.

Case No. 1: Female, 27. Soft density, fairly well circumscribed with drainage bands to enlarged hilum. Most probable diagnosis is primary tuberculosis with activity. Minimal reinfection tuberculosis must be ruled out. In unresolved pneumonia the lesion would not be so dense and would be more fanned out.

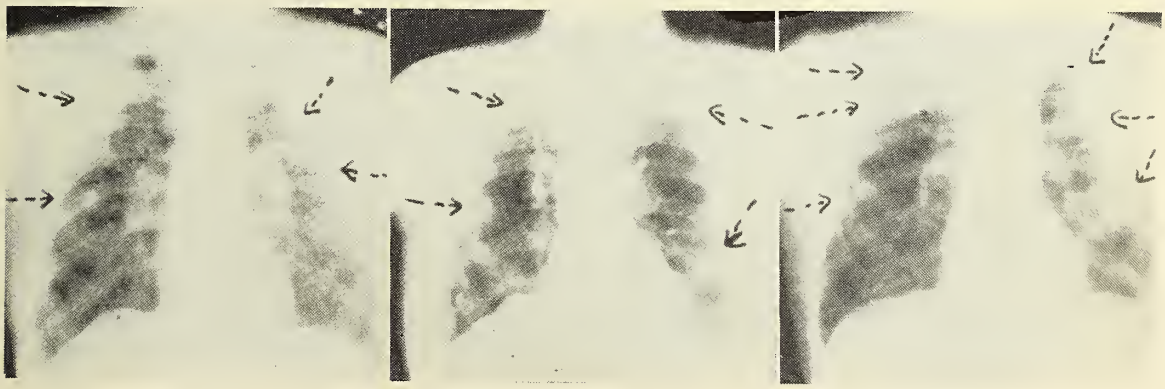
Case No. 2: Female, 28. Density left first interspace. Most probable diagnosis in this case is minimal reinfection tuberculosis. Primary tuberculosis is a probability since one can observe drainage bands from the lesion to the enlarged hilum.

Case No. 3: Male, 38. Nodulation and diffuse mottling present bilaterally, very little evidence of fibrosis. Differential diagnosis: interstitial pneumonitis, silicosis, old calcified reinfection tuberculosis. History, tuberculin tests, and serial x-ray examinations will help to determine the diagnosis.

Case No. 4: Male, 53. Nodulation and placque formation venterally and throughout. Differential diagnosis: silicosis, reinfection tuberculosis, fungus infection. Past history: 1944, cyanosis and unconsciousness. 1946, recurrence with persistent cough and night sweats. Follow-up examination: No reaction to 1 mgm old tuberculin, sputum culture negative, follow-up x-ray examination with diagnosis of silicosis.

Case No. 5: Male, 75. Fibrosis, nodulation, and retraction bilaterally. Long standing far advanced reinfection tuberculosis. Past history: first diagnosed as tuberculosis in 1917. Gain in weight of eight pounds in last three years.

Case No. 6: Male, 72. Nodular densities throughout both lung fields. Some placque formation and pleural reaction. Probable diagnosis is advanced silicosis with superimposed reinfection tuberculosis. Necessary to evaluate this case clinically on the basis of sputum or gastric cultures, tuberculin tests



Case No. 4 Case No. 5 Case No. 6

and serial x-ray examinations along with the past and present history.

Case No. 7: Female, 59. Marked density with atelectasis in right upper (a). There is also a bilateral widening of the mediastinum (b). The mediastinal enlargement is probably due to tortuosity of the aorta. Differential diagnosis: tumor causing closure of the bronchus, lobar pneumonia with atelectasis, Hodgkin's or other lymphoblastoma, but would expect bilateral picture.

Case No. 8: Male, 32. Nodulation and increased markings bilaterally (a), enlargement of root shadows (b). Differential diagnosis: sarcoidosis, reinfection tuberculosis, fungus infection. Tuberculin tests, history and sputum examinations will assist greatly. Absence of symptoms, negative tuberculin test and enlargement of the hilar lymph nodes tend to confirm the diagnosis of sarcoidosis.

Single films such as one obtains in surveys are not always sufficient in themselves to determine the etiological diagnosis, when to re-ray, type of treatment required, or what disposition should be made of the patient. The element of individual judgment by the radiologist, phthisiologist, and private physician manifests itself when the films are read by each of them independently.

In order to insure that the examinee will derive all the benefits from participation in the survey, the leading radiologists in this country, under the auspices of the United States Public Health Service, are studying controlled chest films in order to get together on standard classification in interpreting films.

From the foregoing it is obvious that the survey filming is only a means of screening the apparently healthy population into two groups, (1) those with essentially negative chests and (2) those with some abnormality. The differentiation of those with abnormal findings requires further examinations and clinical evaluation. These patients are referred back to their physician for such evaluation. Thus the first step in follow-up is taken.

The prompt diagnosis of early tuberculosis, early lung cancer, or early heart disease demands an adequate clinical follow-up by the first physician to whom the case has been referred. This is a serious responsibility and not one that the physician can pass off with a few kind words and a pat on the back.

It can be said, therefore, that the clinical evaluation should determine the following:

(1) Etiological diagnosis and whether the disease is communicable.

(2) Extension of the disease and whether the disease is acute or chronic; progressive, retrogressive, or stable.

(3) Prognosis and determination of possible therapeutic procedure.

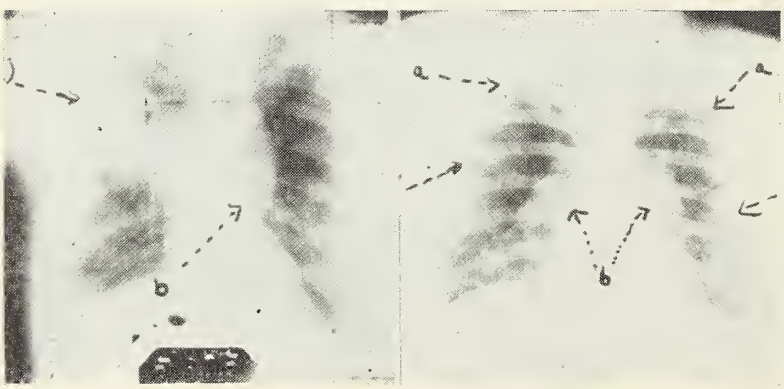
(4) Disposition of the patient and whether his condition requires hospital or sanatorium care or whether he can be given domiciliary care at home.

Tuberculosis should be ruled in or out without delay and the following steps are recommended as a starter:

(1) History. Some of the films will show varying amounts of fibrosis, calcification and nodulation. A complete history of past and present events and occupation will aid greatly in evaluating the case.

(2) Tuberculin Test. A negative test on several trials will rule out tuberculosis except in fulmonating cases when the allergy is lost, in some overwhelming miliary infections, or in some recent cases when the infection has not been present long enough to produce the allergic phenomenon. In addition, the allergic response may be temporarily lost following some infectious disease such as measles. Usually the single test with 0.0001 mgm of a standard Protein Purified Derivative will suffice.

(3) Laboratory Tests. In searching for the tubercle bacillus in the presence of expectoration, the initial examination should be made by direct smear of the sputum. If the direct smears are negative, then cultural studies should be made of the concentrated sputum specimens. If these tests, too, are negative or if there is no expectoration, then a bronchial or gastric lavage should be done in order to obtain specimens for bacteriological analysis. The knowledge of the kind of sputum or lavage used as the specimen and the results obtained will assist the clinician in determining therapy, disposition of the case, and communicability of the disease. A word of caution must be added in regard to cultural studies of gastric specimens.



Case No. 7 Case No. 8

The work of a number of bacteriologists has shown that the gastric acid or enzymes or both have a deleterious effect on the tubercle bacillus. For that reason these specimens must be handled promptly in accordance with the instructions set by the accredited laboratory.

(4) Serial and special x-ray or fluoroscopic examinations. These examinations will determine the extent and position of the lesion. Changes or lack of changes will reveal whether the lesion is acute or chronic, stable, retrogressive or progressive.

If the diagnosis is non-tuberculous, then subsequent follow-up is left to the clinician and the patient may need more detailed clinical or laboratory examinations or series of examinations before the exact cause can be determined.

If the diagnosis is tuberculosis, the next consideration should be disposition of the case. To determine this the physician should consider the presence or absence of tubercle bacilli in the sputum or gastric specimen, the presence or absence of cavities, the extent and character of the pulmonary lesion as revealed by x-ray, and the presence or absence of symptoms.

In the presence of a positive sputum, sanatorium care should be the absolute rule. Tuberculosis is a communicable disease and the other members of the family and community must be protected from further unnecessary exposure if we are to prevent the disease from developing in the contacts.

In the presence of a positive gastric culture and in the absence of positive symptoms, the patient may be permitted home care under specified conditions, such as:

(1) The patient should be domiciliary and not in need of active therapy such as is obtained in a sanatorium.

(2) The patient should be cooperative and intelligent. He should have sufficient means to provide adequate medical care and the necessities of life.

(3) The patient should reside in a sufficiently large home so that he may be adequately isolated from the other members of his household. There should not be any young persons in his home.

The question of sanatorium care is also dependent upon the number of sanatorium beds available in the state and the overall tuberculosis problem. In states where there are sufficient beds, these beds should first be filled with those patients who present a greater public health problem—the frankly open case.

Although a bacteriological confirmation is of great value to the clinician, the treatment of an incipient case should not wait for the bacilli to appear in the sputum as a delay in therapy may prove to be of irreparable damage to the patient.

Once a person has been found to have tuberculosis or suspected tuberculosis he should be reported to the proper public health authorities as required by the existing health laws and regulations. Too often tuberculosis exposures continue because the public has not been adequately protected. It is not the intent of the official public health authorities to embarrass nor to plague the private clinician and his patient, but rather to protect the public from unnecessary exposure to a communicable disease. It is a sad commentary on our present day medical and public health knowledge to have the high morbidity and mortality rates we report annually of this preventable disease.

If we are to succeed in eradicating this disease, we must have a closer working arrangement between the clinician caring for the case and the public health authorities protecting the public. Granted that the open case should be isolated at the sanatorium without delay, special consideration should be given to the large number of patients who are not at the moment infectious or even active, but who must be adequately followed over a long period of time so that if any reactivation occurs, they may be detected immediately. In some areas the authorities follow the rule of watching a case for five years after the condition has been classified as arrested. In our Minnesota experience, in the vast majority of cases found on the surveys there is the important question of continuous follow-up rather than immediate therapy.

The public health authorities can be of great aid to the clinician by lending them assistance through laboratories, quarantine procedures, and education.

Since the public health authorities are responsible for measures to reduce the morbidity and mortality produced by tuberculosis, they must keep a proper case registry through which they can determine which cases, contacts, or suspects are in need of close medical supervision, isolation, or periodic reexamination. The pertinent facts are recorded in such a manner as to provide simple, complete, and easily accessible case histories.

Since supplemental information relative to a patient is received from laboratories, sanatoria, hospitals, clinics, and physicians, it is essential that there be developed and maintained a system of free interchange of information between all of the above named agents or agencies. In this way the majority of patients, who are adequately followed clinically and adequately isolated, if infectious, may never come in contact with the health authorities. However, those patients who disregard their physicians or who refuse to abide by the health laws and regulations will find themselves under public health supervision for as long a period as required to insure the safety of the public.

The patient with a chronic disease is notorious for his fickleness as far as changing physicians is concerned. In addition, a chronic tuberculous patient soon learns how to live with his disease and he soon drops his medical advisor. For that reason, our experience has shown us that there is a definite need for the public health follow-up in every case. We occasionally have a patient who disregards the safety of his neighbors and is not amenable to the advice of his physician. Such patients, for the most part, are incorrigible and have to be isolated through due process of law. Today, more and more states are recognizing the need for commitment laws on the statutes of their states.

The public health nurse plays an important role both in the clinical as well as the public health follow-up. She is continuously educating the individual patients and the public through her home visits, instruction of lay groups, and her daily contacts. Specifically, she follows the recommendation of the physicians in advising patients. A good field nurse has a tremendous influence on the public.

SUMMARY

The results of 40,000 consecutive chest x-ray survey examinations have been evaluated to emphasize the existence of many pulmonary conditions which simulate tuberculosis. In this study there were found 623 cases with abnormal pulmonary findings on the x-ray film. An adequate clinical follow-up and evaluation by the private physician is essential if we are to avoid the numerous diagnostic errors of the past in which we found many persons hospitalized in sanatoria when there was not even a tuberculous infection, while other cases hospitalized in general hospitals and institutions or cared for at home were frank open cases of undiagnosed pulmonary tuberculosis. The responsibility for follow-up is not entirely that of the private physician but also must be borne by the official public health authorities. The role of the public health nurse is discussed in brief.

PENTOTHAL AND CURARE FOR THE MODIFICATION OF ELECTRIC CONVULSIONS

Jesse D. Rising, M.D.**

Kansas City, Kansas

The importance of softening therapeutic convulsions to prevent traumatic complications has long been recognized, but no anticonvulsant agent for this purpose was accepted until Bennett introduced curare. The advantages and disadvantages of curare have been discussed in detail by many workers. Recently, we outlined the properties of curare and other anticonvulsants, and compared the value of pentothal sodium, magnesium sulfate, and curare for the modification of metrazol convulsions in dogs. In the present study we shall present results of experiments which were designed to test the effectiveness and safety of pentothal sodium, curare (Intocostrin), and mixtures of the two drugs for the modification of induced electric convulsions.

METHOD

A total of ten dogs, ranging in weight from 7 kg. to 18 kg. was used in approximately 200 experiments. The temples were shaved, and the skin was rubbed with electrocardiograph paste. The usual electrodes for human shock were used, properly shaped to insure close contact with the skin. The shock machine used on patients was employed in our experiments.

The convulsive threshold for each animal was determined by administering carefully graduated dosage of electric current. No animal was subjected to more than one shock every two days. It was not considered advisable to make wide variations in the period of administration of the current, therefore the shock was applied for either 0.2 or 0.3 of a second in all experiments. The dosage of current was expressed in milliampere-seconds (that is, the product of the milliamperes used multiplied by the duration of application in seconds).

The convulsive threshold was verified at intervals and in nine of the ten dogs it was found to be remarkably constant. One dog was not satisfactory because the threshold varied from day to day. It is interesting that this animal has always been unpredictable in its reactions to drugs, and demonstrates the fact that some individuals depart considerably from the usual reaction to medication.

After the convulsive thresholds were determined, the animals were medicated with varying doses of pentothal sodium intravenously, followed by an interval of two minutes to allow complete effect to develop before the application of the shock. Different amounts of current were given at each level of pentothal dosage to determine the degree of ele-

*Associate in Pharmacology and Instructor in Medicine. From the Department of Pharmacology, University of Kansas School of Medicine, Kansas City, Kansas.

**With the technical assistance of Archie L. Mitchell.

vation of the convulsive threshold. Additional shocks were given using currents at and above the threshold dosage in order to estimate the softening effect of pentothal on the convulsions.

In another series of experiments the animals were given graded doses of curare intravenously. The drug was diluted and given at the rate of one-half unit per kilogram per minute, and an interval of three minutes was allowed for complete effect before the administration of the shock current. Preliminary experiments indicated that curare did not raise the convulsive threshold. Therefore, all animals in this series were given 20 milliampere-seconds above the threshold dose.

In a third series of experiments the effect of combining curare and pentothal was tested in the hope that the desirable qualities of these drugs would complement each other, thereby permitting the use of smaller dosages which should result in the elimination of undesirable side-effects. In this group all animals were given 10 mg. per kg. of pentothal and graduated doses of curare, either immediately preceding pentothal or combined with it. After a three-minute interval a shock of 20 milliampere-seconds above the threshold was applied.

RESULTS

Pentothal was found to elevate the convulsive threshold moderately when given in sub-hypnotic doses (up to 15 mg. per kg.), whereas light anesthetic doses (20 mg. per kg.) prevented the convulsive seizures altogether. Pentothal significantly reduced the period of apnea associated with most of the convulsions. Post-shock excitement was greatly reduced or eliminated. A dose of 10 mg. per kg. produced definite sedation without appreciable hypnotic effect. These data are recorded in Table I.

Curare in doses of less than one unit per kg. could not be relied upon to produce adequate softening, and larger doses caused severe depression of respiration with prolonged apnea. It was necessary to give intravenous prostigmine to one animal following a dose of one unit of curare per kilogram. One dog that had been given 1.5 units per kilogram had to be revived by artificial respiration and prostigmine before shock could be given. Another dog that was given two units per kilogram of curare required the same treatment. This information is summarized in Table II.

Satisfactory softening of all convulsions was obtained with as little as one-half unit of curare per kilogram when it was given in conjunction with 10 mg. per kg. of pentothal. It seemed to make little difference whether the drugs were given in sequence or combined. Perhaps the most remarkable result of this combination was the diminished interference with respiration. The period of apnea was always reduced in comparison with the apnea observed in unmedicated dogs receiving the same shock current, as shown in Table III.

Thus it seems that pentothal, although it produces relatively little softening of electric convulsions, reduces the amount of curare needed to modify the seizures. At the same time it protects the respiratory functions, and reduces pre- and post-shock excitement.

SUMMARY AND CONCLUSIONS

Pentothal raises the threshold to electro-shock

TABLE I

The Effect of Pentothal Sodium on Electro-Shock

Pentothal Mg. per Kg. I.V.	Current in ma.-sec. over threshold	Convulsion Prevented	Softening of Convulsion			Apnea		Post-Convulsive Excitement	
			Slight	Moderate	Marked	Unchanged	Shortened	Same	Lessened
5	0	5							
5	20	1	5	1		1	5		6
5	30		5			4	1		5
5	40		6			3	3	1	5
10	0	2							
10	10	3							
10	20	1		4	1		5		5
10	30	1	2	4		1	5		6
10	40		1	4			5		5
10	50		2	3			5		5
15	40	3			2		2		2
15	50			2	3		5		5
15	60	2	1	1	1		3		3
20	50	2							
20	70	1							
20	110	1							

moderately in applicable doses, but prevents convulsions in high doses.

Pentothal is less efficient in modifying electric convulsions than those induced with metrazol, 10 mg. per kilogram being required in the former as contrasted with 3 mg. per kilogram for metrazol (as previously reported). This dosage can not be transferred directly to human medication, as the dosage of a barbiturate required to produce a specific effect in man is only one-fourth to one-half that required in dogs.

Pentothal decreases both apnea and excitement incident to induced electro-shock.

Curare does not raise the convulsive threshold and is very efficient in softening the seizures, but the range of therapeutic dosage is dangerously narrow.

A combination of pentothal and curare satisfactorily modifies electrically induced convulsions, permits the use of smaller amounts of curare, and is accompanied by less impairment of breathing than that which frequently follows electric shocks preceded by therapeutic doses of curare.

The author wishes to express his gratitude to R. M. Isenberger, M.D., chairman of the Department of Pharmacology, for his instruction and guidance in this work.

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TABLE II

The Effect of Curare on Electro-Shock
(Current Used: Threshold plus 20 milliampere-seconds)

Curare Units per Kg.	Softening of Convulsion			Apnea		Prostigmine	Excitement	
	Slight	Moderate	Marked	Unchanged	Prolonged		Same	Lessened
¼	7			6	1		7	
½	4	1		4	1		5	
¾	2	3		3	2		5	
1		2	3	2	3	1	5	
1¼		1	4		5		5	
1½			5	1	4	1*	5	
2			1		1	1*	1	

*Artificial respiration necessary.

TABLE III

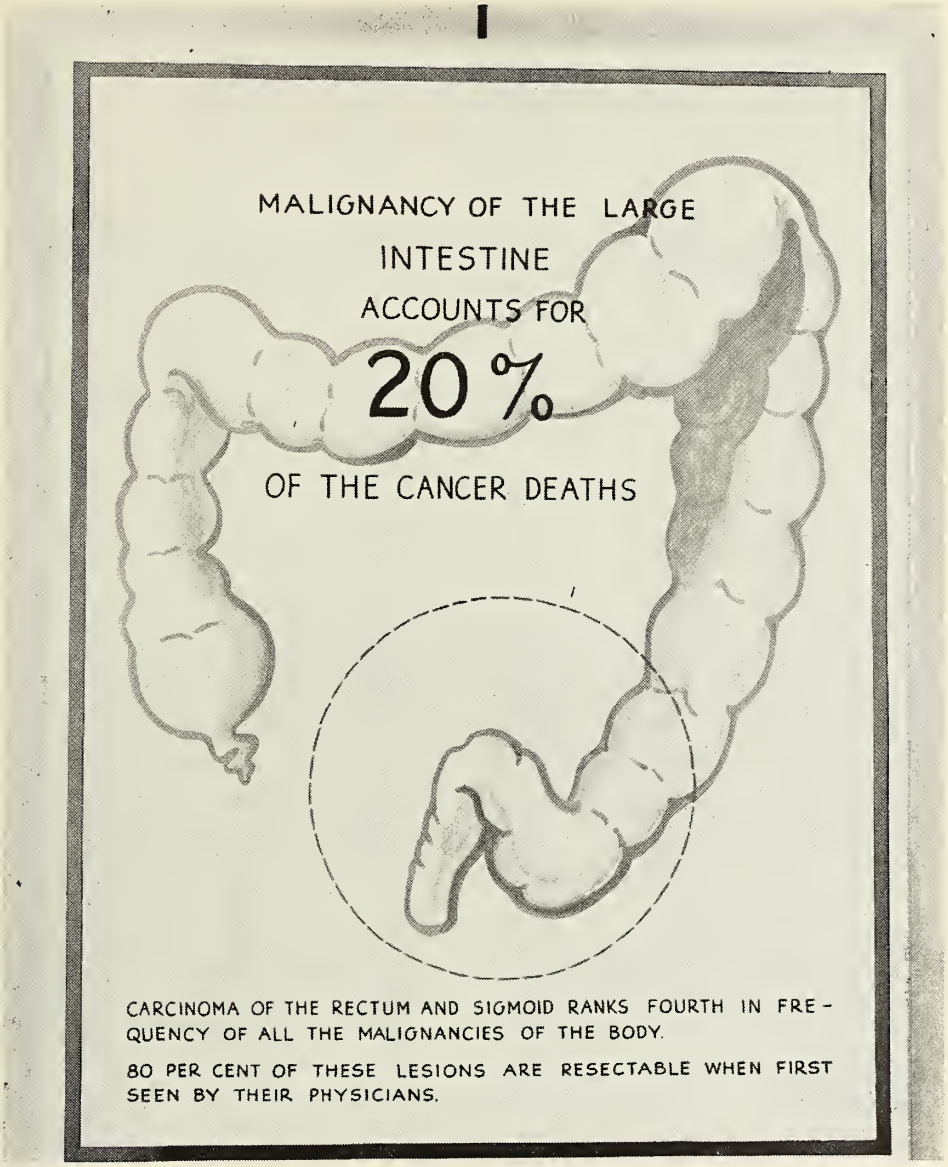
The Effect of Curare and Pentothal on Electro-Shock
(Current Used: Threshold plus 20 milliampere-seconds)

Curare Units per Kg.	Pentothal mg. per Kg.	Softening of Convulsion		Apnea		Excitement	
		Moderate	Marked	Unchanged	Shortened	Same	Lessened
½	10	5			5		5
¾	10	6			6		6
1	10	1	4		5		5
1 with	10	1	4	1	4		5

EMIC Program in Kansas

A total of 22,790 EMIC maternity cases were authorized in Kansas from May, 1943, through June 30 of this year, according to a report issued recently by Dr. Paul R. Ensign, director of the Division of Maternal and Child Health, Kansas State Board of Health. Under the program, 5,650 infants received medical care in Kansas. Federal funds allotted to our state for the four-year period amounted to $2,119,468.

At the height of the program, Dr. Ensign reports, one of every three babies born in Kansas was born under the EMIC plan, as compared with one of every seven for the United States as a whole.



A COMPLETE PROGRAM ON

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This program was arranged by the Committee on Control of Cancer and was prepared by a subcommittee headed by Dr. Karl E. Voldeng of Wellington, with the cooperation of a number of members of the Kansas Medical Society. It is made available to county societies through the assistance of the Kansas Division of the American Cancer Society. Requests for the program may be sent to

Committee on Control of Cancer
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WHY ARE PHYSICIANS THUS?

At the last meeting of the Kansas Medical Society in Topeka the entire business of the Society, which is as democratic as any organization could be, was handled by 38 delegates of a possible 104. Viewed from any perspective there are no organizations so important to medical men as our own, so, one wonders why such apathy exists. The scientific programs are always of the highest possible quality. The sociability is most pleasant. The committee efforts are, for the most part, important contributions to the health of the people of Kansas and the advancement of scientific education and practice. The meetings are a constitutional necessity and by experience over many years have been placed at the best possible time. Why should not all members take active interest in county, state and national medical affairs? No man should take the position as "delegate" to represent his fellow practitioners unless he is willing to fulfill that obligation. Certainly more than 30 per cent could attend if they would.

As a group we are notoriously lax in accepting much political responsibility. We seldom know who is on our Republican or Democratic precinct committees and never attend meetings where candidates are selected. We find little time, it seems, to discuss issues with candidates where and when we might help to mould opinion or policy. We are disdainful of politics and sometimes of politicians with an open statement or implied one of derision concerning all things political. The truth is that even if our criticisms are just we've no right to make them when we have put forth so little effort ourselves where our political system begins. The precinct where we live is the basis of the political system, which is ours. Right or wrong it is ours and will continue to be. We should therefore work with it by showing a genuine interest in personalities and issues involved.

Let everyone answer the title question for himself. There are reasons for our apathy of course, but they are more nearly excuses than reasons. I find that doctors are, in general, a fine group of men, whose record is praiseworthy. A little interest and time are all that is needed to improve both of the above.

L. S. Nelson

President.

EDITORIALS

Long Live Change! ! !

It is a natural process, seemingly, for folks to fall into the rut of doing things because it is customary to do them. Our minds seem to groove so much more easily than they are able to change from time to time, as new developments come in knowledge and living. A good many nations who have lived in the old past, have perished for no other reason than that they insisted in living as their fathers and grandfathers had lived before them. They would not tolerate changes to meet newer living conditions developed by newer races who had no established conventions or rules or regulations.

Nor does one have to travel back in time to see this. Today, all Europe—long tied to "Let well enough alone," and "The good old days and times are best," is seething in revolution by desperate, submerged and non-privileged peoples. No matter how much we GIVE them, (and they will take it as long as it is available), in the end they will be socialistic or communistic, and with a great sprinkling of Facists. They seem neither organized, nor desirous, nor educated to be able to govern themselves. They are easy push-overs for ambitious power and glory seekers, who take all power in their hands and rule by dictate.

Let's take a look at medicine! Might we see a parallel there to "The Rut." Medicine, in the United States, in its first 150 years, developed in new and wide spaces of country with a relatively small population. Medical knowledge was not too inclusive. Most physicians were general practitioners. They were solo workers who had not too much association with other physicians.

There has been quite a furore lately about bringing the general practitioner back to former estate. This writer, speaking for himself alone, does not believe it will be done.

First, medical knowledge is so great that no single individual can ever accomplish a large part of it. Nor can the great skills needed today come from small practice in them.

Second, a solo worker is handicapped by too little cooperation working with other physicians. Rather, he, and too often they, consider themselves as competitors rather than co-operators. Certainly it is a very general lay idea.

Third, social and economic conditions are rapidly changing. They have to be met with change.

How much better and more efficient it would be for the physicians, and how much better medical service could be given, if the two or three or four or five or six or ten physicians, in smaller towns and cities, would come together in a single office building. They could have a central laboratory for all, a thing not all of them could do alone. The help they could give each other in emergencies would be very great. They could ALL be general practitioners at first, if that was the way it came up, but individuals would tend to interest themselves more and more in the line of their greater inclination. So that after a time they could have very capable men in the more common specialties. And, THE GROUP could be the general practitioner for that community.

Larger centers will establish larger centers with greater facilities. Centers could and should include the smaller groups in smaller places. And the smaller groups should be on an equal footing with the larger. And this spread out must include those communities which have only one physician. This might be a very satisfactory solution of the present unequal distribution of physicians.

It is a large program. It will require vision (quite a little of this has been supplied). It will take patience and tact, and much willingness to work with others. Its hope is in the graduates in medicine of the last 20 years, and those who will graduate in the future, plus the help and counsel of "The Elder Statesmen" in Medicine who have not allowed themselves to become grooved in their minds. (But there will be old coots so grooved that they still believe the world is flat, who will try to horn in as advisers or directors). The first problem rests squarely upon the shoulders of some one individual who CAN organize and direct a group. And, in the first five years, his great task will be to keep the group together, to keep its members from breaking up because of many small disagreements, so great is the memory of, and the grooving in, solo work. But the thing could be done. And if we don't do it ourselves, it will be done for us. Make no mistake about that.

The solo general practitioner is passing!

Long live the general practitioner of the group!

A.K.O.

A Colorful Journal

Colored illustrations for scientific articles have not appeared in the Journal in the past so it is with pride that the Editorial Board calls attention to the paper, "Cancer Diagnosis by Smears," in this issue. This scientific article, written by Dr. Wendell A. Grosjean of Winfield, includes a page of four-color illustrations.

The subject of cancer diagnosis is of great interest to members of the medical profession, and the use of color in these illustrations heightens the

effect of the subject matter and gives the physician a more accurate picture of the findings. Along with the paper Dr. Grosjean submitted two sets of illustrations, the first a series of the usual black and white glossy prints, and the second a series of colored photomicrographs from which the cuts for color reproduction were made. It was learned through a conference with the engraver that the photomicrographs were fine material for color printing, and, with the author's help, the Journal made arrangements for their reproduction. The Editorial Board is deeply indebted to Dr. Grosjean for these illustrations and for the opportunity of publishing this type of scientific material.

Many members of the Kansas Medical Society who have been reading the Journal in recent years have commented on the changes that have taken place with advancements in the printing arts and changes in style. The Journal's characteristic blue cover was adopted in 1942, and the present cover design was approved at that time. Even before that date several advertisers had used a second color, red, to highlight their advertisements. In 1945, colors other than red and blue made an appearance in the Journal, and the number of pages of color printing in each issue has been steadily increasing since that time. So many advertisers, in fact, employ color in their copy that the Cooperative Medical Advertising Bureau, the agency in the A.M.A. offices in Chicago that represents state medical journals in dealing with advertisers, has issued a standard color chart as a guide for different shades and intensities of printing inks.

It is the hope of the Editorial Board that the Journal will continue to progress in the future as it has through the years since 1901 when the first small issue was published. The Journal belongs to all members of the Kansas Medical Society, and its columns reflect their ideas and enthusiasms. Suggestions for its improvement are always welcome.

Postgraduate Education Fund

During World War II, when more than 400 physicians from Kansas were in uniform, those who remained in civilian practice were invited to contribute to a fund for post-graduate educational courses for their colleagues in the service. It was planned that gifts from this fund be given all returning service men who wished to do postgraduate study, as a gesture of appreciation for their work in the armed forces.

The project was announced to the membership in the Journal for September, 1944, and contributions in varying amounts soon began arriving at the Society office. A total of $42,752.25 was received, and although this amount was not large enough to defray complete educational expenses for the veterans who wished to take postgraduate courses, it made possible a number of substantial gifts.

To date 95 of those who have returned to the state since their release from the service have received benefits from the postgraduate education fund. Some enrolled for courses before returning to civilian practice; others practiced for a time in their former communities before leaving to do graduate work; some are now planning a course of study for the future. Benefits under the postgraduate education plan are available to all physicians who entered the service from Kansas.

The 95 veterans who have enrolled for graduate work have chosen medical schools and hospitals throughout the nation, and their subjects have covered general practice and all the specialties. Some have taken short refresher courses and others have been interested in work requiring a year or more.

Under the chairmanship of Dr. Harold H. Jones, Winfield, the Committee on Postgraduate Education acts on all applications and approves payments. Amounts have varied with the length of time required for completion of the course, with an average of $209. Without exception, the recipients have expressed deep appreciation. A total of $19,865 has been paid from the fund to date, leaving a balance of $22,887.25.

This amount of money will provide benefits for all veterans who wish to do graduate work, and it is the hope of those who contributed to the fund, as well as members of the Committee on Postgraduate Education, that a large number of physicians will plan graduate courses. Many doctors are now re-established in civilian practice and can arrange time for courses in the work in which they are most interested. Medical schools are offering graduate work in all types of practice.

Members of the Society who stayed at home during the war had only one purpose in mind when contributing to the fund—that as many as possible of those in military service would accept this token of appreciation and enjoy the benefits of postgraduate courses. Applications are welcomed at the Executive Office at all times. The doctor need state only the type of work he wishes to take, the school of his choice, and the date and duration of his course. This information will be forwarded to the chairman of the committee and will receive immediate attention.

Kansas Physicians' Service is one of 10 voluntary prepayment medical care plans in the country in which enrollment now totals between 25,000 and 50,000. At the half-way mark in 1947, K.P.S. memberships numbered 34,421, an increase of 136.4 per cent over 1946. Eighteen plans in the United States showed membership in excess of 100,000, and eight listed between 50,000 and 100,000.

EXECUTIVE OFFICE

Material for this column is taken from articles coming to the attention of the Executive Office. They may concern controversial issues and will not necessarily reflect the editorial opinion of the Journal. Articles republished or summarized here are presented because it is believed they will be of interest to the medical profession in Kansas.

Medicine In India

The March issue of the Journal of the Indian Medical Association containing a review of the All-India Medical Conference recently arrived. Included at the meeting were delegates from 335 branches of the Indian Medical Association representing a membership of 10,130. The presidential address, delivered by Dr. P. B. Mukerji, outlined at considerable length many of the problems confronting this newly made independent nation of four hundred million inhabitants.

For instance, the death rate for the general population in 1937 was 22.4 per thousand inhabitants while in America it was 11.2. Deaths among children under ten years of age were 48.4 as compared to ten per cent in Great Britain. Life expectancy for India was 26 years while more than 60 in the United States. Smallpox takes almost 70,000 lives and cholera almost 150,000 each year. Two and a half million persons have active tuberculosis, and in the entire nation there are only 6,000 beds providing isolation. At least one hundred million have malaria and two million die directly or indirectly as the result of this disease each year. Hospital beds of all types are available at the rate of .24 per thousand as against 10.48 in the United States.

There are 47,500 doctors in India, or one doctor to 6,500 persons. In reality, however, this does not represent the true picture since almost all trained physicians live in the larger communities and frequently areas of hundreds of miles with many thousands of persons have no physicians available. The president summarized these conditions as follows. "The lamentable picture, revealed by these figures, provides the severest condemnation of the British administration of India for the last century and a half and indicates the enormity of the task with which the Committee were faced in making constructive suggestions and recommending a sound and comprehensive scheme of National Health Service for development of health in India."

The committee referred to has been at work for some time attempting to evaluate India's health needs. The survey and recommendations were submitted to the All-India Medical Conference in four volumes which the president took considerable time to discuss. He said, "The weighty and difficult problems of health development of a vast nation, short of food, short of water, short of shelter, short of sanitation, short of education and short of medical care, have been stated in a dry, analytical and forceful manner and it will amply pay a careful reading of the full report by every earnest and devoted student of the health problems of India."

Among the specific recommendations made by this politically appointed committee are some that sound familiar to physicians in the United States. One is that all medical care for rich and poor alike should be free of charge to the people and that all physicians should be appointed by the government on a salary basis. The Indian doctor looks forward to such prospects with about as much pleasure as does the doctor in America.

The president of the Indian association expressed his opinion. "My fundamental objection to making medical service free to all, without any payment whatsoever for the benefits received, lies in my desire to spare the people the humiliation of being recipient of charity. Nothing is valued in this world for which no payment is made and health is a commodity which has to be earned and paid for like all other necessities of life. To the argument that a vast majority of the people of the country have not the means to pay for medical benefits, my answer is, have they the means to secure for themselves and the members of their families two square meals a day or a house to live in or sufficient cloth to protect themselves from the wind, the rains and the cold? Has any proposal ever been made by any responsible body of public men that food, cloth and a house, which are the prime necessities of life for every man, woman and child, should be supplied free to all, without distinction, by the State? If it is contended that health is one of the goods of life to which man has a right and that medicine should, therefore, become a public function of the State, I would ask: are not food, cloth and shelter, without which no man can live, equally the goods to which he has a prior claim? A man must live in order to fall ill. Food, cloth and shelter come, therefore, before health; and, if the latter is to be supplied free to all, the free provision of the former must receive prior consideration to enable the recipient thereof to maintain a body which will be susceptible to the influences of health and disease. It is, therefore, my contention that, if people have to work and earn to pay for the prime necessities of life, they should also be taught that health is a commodity for the achievement, preservation and enjoyment of which they should have the right and privilege of paying, if not fully, at least in part, in accordance with their means and capacity. . . .

"The Bhore Committee was not appointed without a purpose and some of its recommendations, valuable as they are, may be utilized to serve a political purpose, unless the profession remains alert, watchful and vigilant. We may expect before long a National Health Service Bill, either at the Centre or, simultaneously, in the Provinces, incorporating in its provisions those recommendations of the Committee which will offer to the whole population of India a complete medical service, general practitioner, consultant and specialist, institutional and nursing—free of immediate charge for the services rendered. This will presuppose regimentation of all medical men in a wholetime salaried State service and will mark the beginning of the end of Medicine as a profession."

Research Fellowships

The American College of Physicians announces that a limited number of fellowships in medicine will be available from July 1, 1948, to June 30, 1949. These fellowships are designed to provide an opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in internal medicine. The stipend will be from $2,200 to $3,000.

The aim of rehabilitation is to bring about the optimum adjustment of each patient in spite of any physical defects, mental deficiencies, emotional weaknesses and social shortcomings that he may have.—Ezra Bridge, M.D., Amer. Rev. of Tub., April 1947.

Advisory Hospital Council

The Kansas Advisory Hospital Council appointed by the Governor on June 26, 1947, to advise and consult with the Kansas State Board of Health in respect to the development, approval and administration of the state's hospital construction program and to set up minimum standards for the licensing of Kansas hospitals, held its first meeting in Topeka on August 22. The council supplants the Advisory Hospital Commission which functioned before the 1947 session of the legislature to do initial work on the program.

A list of council members, together with the number of years each will serve under present appointments, is as follows: Dr. John L. Grove, Newton, 4; Charles Newell, Kansas City, 3; Ray Pierson, Burlington, 1; Dr. James D. Bowen, Topeka, 1; Merton Earl, Topeka, 2; Zelma Smith, R.N., Russell, 2; Sister Mary Anne, R.N., Pittsburg, 3; Irma Law, R.N., Emporia, 4; Mont Green, Manhattan, 4; Dr. F. C. Beelman, secretary of the Board of Health, ex officio secretary. Dr. Grove was elected chairman of the council.

Dr. Beelman summarized events leading to the formation of the council by explaining that federal funds are available under the Hill-Burton Hospital Survey and Construction Act only when a state agency accepts the responsibility of administering the program and when there is provision for the establishment, development and enforcement of standards for hospitals. During its 1947 session the Kansas legislature passed an enabling act giving the Board of Health authority to carry out the program and approved another act providing the necessary foundation for definite hospital standards. The council approved action that has been taken to date and commended the work of the Advisory Hospital Commission.

The council decided that information should be compiled on hospital standards in all states of the union before a decision on standards for Kansas is made, and approved Dr. Beelman's suggestion that temporary licenses be issued for the present. Applications for such temporary licenses will be sent from the office of the Board of Health to every hospital in the state.

Dr. R. M. Heilman, director of the Hospital Facilities Division of the Board of Health, and Charles Billings, hospital administrator, explained the preliminary work that has been done in the study of Kansas hospitals and distributed copies of a report on the number of additional beds needed. Three methods were used in determining this need, the population ratio, the birth and death ratio, and the mathematical square root procedure worked out by the National Commission on Hospitals. An average of the three methods was used as the index to the number of beds needed in an area. The council approved the basic principle of the state plan and progress that has been made.

Plans were made to send application forms for community participation in hospital construction to the agency responsible for construction, and to give information on the manner in which applications will be processed, although no committments regarding priority of participation in federal funds will be made until later.

The second meeting of the council will be held October 13, 1947.

Medal to Honor General Practitioner

To give increased emphasis to the work of the general practitioner, the A.M.A. has created a Section on General Practice, is planning a scientific session for the time of the midwinter meeting of the House of Delegates in Cleveland January 7 and 8, and has announced an award of a gold medal each year to a selected general practitioner who has rendered exceptional service to his community.

This award, similar to the A.M.A.'s Distinguished Service Medal given annually since 1938 for scientific advancement in the field of medicine, is designed to honor a general practitioner who has served as a family physician and who has in that capacity received the recognition of his community. Nominations may be submitted to the headquarters of the A.M.A. by any state medical association or any community service club such as Rotary, Kiwanis or Lions clubs, by Chambers of Commerce, women's clubs, community councils or similar groups. Nominations should include the name and address of the physician, an outline of his scholastic record and a report of his medical service to his community.

All nominations will be submitted to the executive committee of the Section on General Practice, and from this group five candidates will be selected. Their names will be submitted to the Board of Trustees, and the Board in turn will nominate three to the House of Delegates. On the opening day's meeting at the supplemental session, the House of Delegates will receive the nominations and will choose by ballot the physician who is to receive the medal.

USPHS Research Fellowships

The United States Public Health Service, which has supported research projects throughout the nation, announces that a total of $10,214,174 was expended during the period from January 1, 1946, to August 31, 1947. Fellowship applications are acted upon at three-month intervals, under the authority of the Surgeon General, and application forms may be secured from the Division of Research Grants and Fellowships, National Institute of Health, Bethesda 14, Maryland.

A recent release from the Public Health Service lists the following grants to Kansans:

C. M. Downs, University of Kansas, Pathogenesis of Tularemia, $7,104.

H. A. Wenner, M.D., University of Kansas, Antihyaluronidase to Group A Streptococci, $700.

K. E. Jochim, University of Kansas, Dynamics of Circulation, $10,505.

S. J. Wilson, M.D., University of Kansas, Blood Coagulation Factors in Health and Disease, $6,375.

R. G. Barker, University of Kansas, Field Study of Children's Behavior, $16,800.

E. M. Leitch, M.D., and S. K. Escalona, Ph.D., Menninger Foundation, Early Phases of Personality Development, $18,795.

M. Brenman, Ph.D., and M. Gill, M.D., Menninger Foundation, Use of Hypnosis in Psychotherapy, $26,500.

W. C. Young, University of Kansas, Reproductive Failure in Mammals, $12,971.

P. W. Schaffer, M.D., University of Kansas, Hyperactivity of Sympathetic Efferent Nerves, $5,588.

H. A. Wenner, M.D., University of Kansas, Encephalitis, $12,483.

Oklahoma City Clinical Society

The 17th annual conference of the Oklahoma City Clinical Society will be held October 27-30, at the Hotel Biltmore, Oklahoma City. The program will include papers by 17 guest speakers, postgraduate symposia, a clinical pathological conference, round-table luncheons, a dinner party, and a stag party. Reservations may be made by writing the Clinical Society, 512 Medical Arts Building, Oklahoma City.

ANNOUNCING THE SEVENTEENTH ANNUAL CONFERENCE OF THE OKLAHOMA CITY CLINICAL SOCIETY

October 27, 28, 29, and 30, 1947

DISTINGUISHED GUEST LECTURERS

Edword Allen, M.D., GYNECOLOGY, University of Illinois School of Medicine, Chicogo, Illinois.
William Arthur Altemeier, M.D., SURGERY, College of Medicine, University of Cincinnoti, Cincinotti, Ohio.
Carl E. Badgley, M.D., ORTHOPEDIC SURGERY, University of Michigon School of Medicine, Ann Arbor, Michigon.
Edward L. Bortz, M.D., President of the Americon Medicol Associotion, Philodelphio, Pennsylvonio.
A. Carlton Ernstene, M.D., MEDICINE, Clevelond Clinic, Clevelond, Ohio.
Wiley Davis Forbus, M.D., PATHOLOGY, Duke University School of Medicine, Durhom, North Corolino.
Thomas E. Janes, M.D., SURGERY, Surgicol Division, Clevelond Clinic, Clevelond, Ohio.
H. Dabney Kerr, M.D., X-RAY THERAPY, College of Medicine University of Iowa, Iowo City, Iowo.
Linwood D. Keyser, M.D., UROLOGY, Roonoke Hospitol, Roonoke, Virginio.
Edward Lacy King, M.D., OBSTETRICS, Tulone University School of Medicine, New Orleons, Louisiono.
Frank D. Lathrop, M.D., OTOLARYNGOLOGY, Lohey Clinic, Boston, Mossochusetts.
George M. Lewis, M.D., DERMATOLOGY, Cornell University School of Medicine, New York City, New York.
Samuel F. Marshall, M.D., SURGERY, Lohey Clinic, Boston, Mossochusetts.
Herbert C. Miller, M.D., PEDIATRICS, University of Konsos School of Medicine, Konsos City, Konsos.
Edith L. Potter, M.D., PATHOLOGY, Unive·sity of Chicogo School of Medicine, Chicogo Lying-In Hospitol, Chicogo, Illinois.
C. Wilbur Rucker, M.D., OPHTHALMOLOGY, Moyo Foundotion, Groduote School of the University of Minnesoto.
Cyrus C. Sturgis, M.D., MEDICINE, University of Michigon School of Medicine, Ann Arbor, Michigon.
Elmer G. Wakefield, M.D., MEDICINE, Moyo Foundotion, Groduote School of University of Minnesoto.

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For further information, address Executive Secretary, 512 Medical Arts Building, Oklahoma City

REFRESHER COURSE ON FRACTURES

NOVEMBER 3 AND 4

UNIVERSITY OF KANSAS MEDICAL CENTER, KANSAS CITY

FACULTY

Guest Instructors:

FREMONT A. CHANDLER, M.D., Professor of Orthopoedic Surgery ond Heod of the Deportment, University of Chicogo; Director, Illinois Surgicol Institute for Children, Chicogo.

PHILIP D. WILSON, M.D., Chief of Orthopoedics, Hospitol for Speciol Surgery, New York City.

JOHN B. JARROTT, M.D., Orthopoedic Surgeon, Hutchinson.

MANUEL E. PUSITZ, M.D., Orthopoedic Surgeon, Topeko.

CHARLES R. ROMBOLD, M.D., Orthopoedic Surgeon, Wichito.

JOHN F. THURLOW, M.D , Orthopoedic Surgeon, Hoys.

CLYDE B. TREES, M.D., Orthopoedic Surgeon, Topeko.

University of Kansas Faculty:

REX L. DIVELY, M.D., Assistont Professor of Surgery.

JAMES R. ELLIOTT, M.D., Assistont Professor of Surgery.

C. L. FRANCISCO, M.D., Assistant in Surgery.

NICHOLAS L. PICKARD, M.D., Instructor in Surgery.

DONALD L. ROSE, M.D., Assistont Professor of Physicol Medicine.

WILLIAM L. VALK, M.D., Associote Professor of Surgery (Urology).

JAMES B. WEAVER, M.D., Professor of Clinicol Orthopoedic Surgery.

SUBJECTS TO BE PRESENTED

The Treotment of Froctures About the Elbow in Children.

The Treotment of Colles' Froctures ond of Froctures of the Corpol Bones.

The Treotment of Froctures of the Shoft ond Upper End of the Humerus.

The Treotment of Froctures of the Upper End of the Rodius ond Ulno.

The Treotment of Froctures of Both Bones of the Foreorm in Children.

The Role of Physicol Theropy in the Treotment of Frcctures.

The Treotment of Froctures of the Metocorpols ond Pholonges.

The Use ond Abuse of Metol Fixotion in the Treotment of Froctures.

The Treotment of Froctures of the Upper End of the Tibio.

The Treotment of Froctures of the Shoft of the Femur.

The Treotment of Froctures of the Hip.

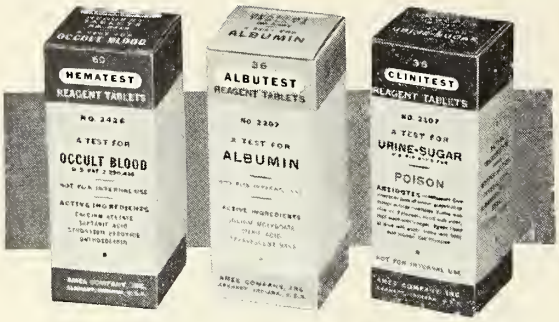
The Treotment of Froctures About the Ankle.

The Treotment of Fractures of the Vertebroe.

The Treotment of Urologicol Complicotions of Froctures of the Vertebroe ond Pelvis.

Experience in the Use of Bone Bonk in the Repoir of Bone Defects.

Recent Advonces in the Treotment of Froctures.



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MEMBERS

Dr. J. A. McLaughlin, who has been practicing in Greensburg for 35 of his 48 years as a physician, writes the Journal that he is moving to Wichita. He does not plan to retire from practice, but will limit his work.

* * *

Dr. G. M. Edmonds, Horton, announces that he is entering partnership with Dr. Alfred G. Dietrich, formerly of Kansas City, Missouri, in the operation of the Horton hospital. Dr. Dietrich has purchased the hospital share of the late Dr. L. C. Edmonds.

* * *

Dr. Robert Harp, who has been practicing in Oklahoma City, has returned to Kansas and has opened an office in Burlington.

* * *

Dr. Paul Davis, formerly superintendent of the state epileptic hospital at Parsons, was recently appointed superintendent of the new Great Bend annex to the Larned state hospital and assumed his new duties September 1. The hospital, to care for from 500 to 600 patients from the overcrowded hospitals at Larned, Osawatomie and Topeka, will probably be opened in 60 days.

* * *

Dr. Thomas C. Hinkle, Onaga, is the author of a book, "Blaze Face," recently published by William Morrow and Company. Dr. Hinkle has written 22 animal stories that are favorites of children.

* * *

Dr. Robert B. Stortz, who has been practicing in Galena since his discharge from the Army, is now opening an office in Madison.

* * *

Dr. H. P. Palmer of Scott City and Dr. A. L. Ashmore of Wichita were recently appointed to the advisory commission for the state tuberculosis sanatorium at Norton. Dr. F. A. Trump of Ottawa and Dr. Hugh Hope of Hunter were reappointed to the commission.

* * *

Dr. A. K. Ratzlaff, Goessel, announces that Dr. E. S. Rich, who recently completed his internship at the Henry Ford hospital in Detroit, is now associated with him in practice. Dr. Rich is a graduate of the University of Kansas School of Medicine.

* * *

Dr. Raymond H. Hughes, who was a member of the student health service at Kansas State College, Manhattan, before entering the Army Medical Corps in 1942, has returned to Manhattan and is now associated in practice with Doctors W. C. Schwartz, K. F. Bascom and B. B. Little.

* * *

Dr. J. E. McManis, Havensville, was honored on August 31 with a party in celebration of his 80th birthday. Three hundred residents of the city participated in the event in recognition of Dr. McManis' services during the past 45 years.

* * *

Dr. Fred D. Baty, who has been practicing in Liberal, recently moved to Elkhart and has opened an office there.

* * *

Dr. Edward J. Ryan, Emporia, was certified by the American Board of Internal Medicine recently.

* * *

Dr. Ralph G. Ball, Manhattan, announces that Dr.

William R. Coutant, now on terminal leave from the Army, is to be associated with him in practice. Dr. Coutant is a graduate of the University of Kansas School of Medicine.

* * *

The American College of Surgeons, meeting in New York in September, admitted four Kansans to fellowship, Dr. Henry S. Blake, Topeka; Dr. Wilbur G. Cauble, Winfield; Dr. Bruce P. Meeker, Wichita; Dr. Andrew E. Rueb, Salina.

* * *

Dr. Murray Eddy, Hays, announces that Dr. Floyd L. Smith, who was recently released from the Navy, is now associated with him in practice.

* * *

Dr. Orville R. Withers, of the faculty at the University of Kansas School of Medicine, will be one of the guest speakers at the instructional course in allergy sponsored by the American College of Allergists at Cincinnati, November 3-8. His subject will be "Gastro-Intestinal Allergy in Children."

* * *

Dr. Fred Mayes, Topeka, assistant state health officer, spoke on "The Role of the State Health Department in Developing Local Health Services" at the National Conference on Local Health Units held at Princeton University September 8-10.

* * *

Dr. Fagan N. White, Russell, became a member of the International College of Surgeons at its annual meeting held in Chicago last month.

* * *

Dr. Herbert C. Miller, professor of pediatrics at the University of Kansas School of Medicine, is to be a guest speaker at the annual fall conference of the Oklahoma City Clinical Society, October 27-30.

* * *

Dr. P. S. Loewen, formerly of Wichita, has accepted a position at the Protestant Deaconess Hospital, Evansville, Indiana.

* * *

Dr. W. P. Callahan, Wichita, announces that his son, Dr. W. P. Callahan, Jr., is now associated with him in practice.

* * *

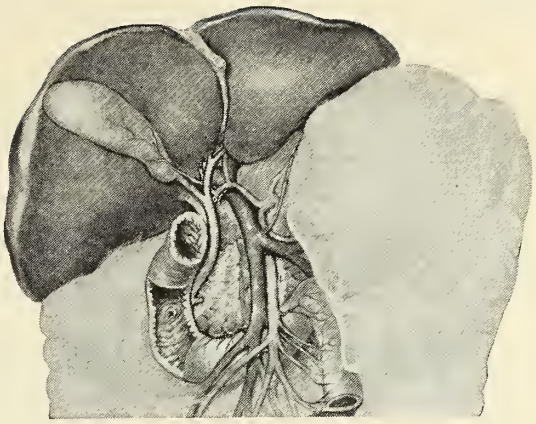
Dr. J. Gordon Claypool, formerly of Manhattan, has moved to Howard and has opened an office there for general practice.

Dr. Nelson Elected to Office

Dr. Barrett A. Nelson, Manhattan, who has been serving as a commissioner for Associated Medical Care Plans, Inc., was elected vice chairman of the organization at the second annual conference held in St. Louis September 20 and 21. Dr. Nelson also serves as chairman of the Committee on Physician Cooperation and chairman of the Committee on Membership for the group. He is also president of Kansas Physicians' Service, a position he has held since the plan for prepaid medical care was organized in this state.

Industrial Health Meeting Postponed

Because of a conflict of dates with the American Public Health Association, the eighth annual Congress on Industrial Health, previously announced for October 8-10 at Detroit, has been postponed. The meeting will be held at Cleveland, Ohio, January 5 and 6, 1948, at the time of the mid-winter meeting of the A.M.A. House of Delegates.



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COUNTY SOCIETIES

The Central Kansas Medical Society and the Saline County Medical Society held a joint meeting at the Ellsworth country club on September 11. Dr. L. S. Nelson, Salina, presented a paper on "Anticoagulants in the Treatment of Post-operative and Post-partum Complications," and Dr. Maurice Snyder, Salina, discussed "New Cures in Heart Disease." A dinner at the club followed the scientific program.

* * *

The Marion County Society met September 3 at Marion. For the program a movie on loan from Princeton University was shown, depicting the contrast between an appendectomy performed in 1900 and a similar operation performed today.

* * *

The Tri-county Medical Society, composed of Cowley and Sumner counties in Kansas and Kay county, Oklahoma, held its first fall meeting at the Arkansas City country club on September 11. A golf tournament was held in the afternoon, followed by dinner and an evening program. Dr. A. J. French, assistant professor of pathology, University of Michigan, presented a paper, "Histopathologic Changes in the Vulva and Ovary," illustrated with colored photomicrographs. Dr. Harold T. Low of Pueblo, Colorado, spoke on "Debunking Complacency and False Security Relative to Compulsory Health Insurance."

* * *

Twenty-five members of the Harvey County Society met September 8 at Halstead. They were guests of the Sisters of St. Joseph at the Halstead School of Nursing for dinner. Dr. V. E. Chesky, Halstead, discussed "Surgical and Medical Management of the Toxic Thyroid," and illustrated the paper with lantern slides. Dr. Francis E. Bishop, of the Division of Tuberculosis Control, State Board of Health, explained the service of the division in taking miniature chest x-rays and reported that the mobile x-ray unit would be available in Newton soon.

* * *

A meeting of the Pottawatomie County Society was held September 10 at Onaga. Dr. Eugene Walsh, associated with Dr. C. S. Fleckenstein in Onaga, was elected to membership.

* * *

The Cloud County Society has been named to take charge of a portable iron lung and respirator now being purchased by the Elks lodge of Concordia. The equipment may be used without charge by residents of Concordia and its trade territory.

* * *

Dr. and Mrs. Richard McKee, Leavenworth, entertained members of the Leavenworth County Society at a dinner meeting at their home on September 9. Additional guests were doctors taking part in the refresher cours in anesthesiology being offered at the University of Kansas School of Medicine at that time. Forty physicians were present.

* * *

The Saline County Medical Society was host to the Golden Belt Medical Society at a meeting held at the Salina Country Club on October 2. The scientific session was followed by a dinner meeting and informal program. Dr. Harold L. Gainey, of the University of Kansas School of Medicine, spoke on "Endometriosis," Dr. Lewis L. Robbins of the Menninger Foundation, Topeka, discussed "Changing Trends in Psychiatry and Their Implications for General Medicine," and Dr. Herbert C. Miller, professor of pediatrics at the University School of Medicine, presented a study on "Feeding Problems in Infancy and Childhood."

* * *

Members of the Shawnee County Society met September 4 for an afternoon and evening session. After a buffet dinner Dr. Sloan J. Wilson, of the University of Kansas School of Medicine, spoke on "The Diagnosis and Treatment of Hemorrhagic Diseases." During the business session it was announced that the Society has secured new quarters and will move in November to the new Casson building at the corner of Sixth and Topeka boulevard.

* * *

Members of the Wilson County Society met with members of the Auxiliary for a dinner at the coffee shop in Fredonia September 17. A business session was held later at the home of Dr. A. C. Flack, and plans were made for immunization of the children of the county against diphtheria.

Death Notices

HERBERT DAVID STERRETT, M.D.

Dr. Herbert D. Sterrett, 69, died at his home in Hutchinson on August 25 after an illness of three months. A member of the Reno County Medical Society, Dr. Sterrett had practiced in Hutchinson since 1906, specializing in eye, ear, nose and throat work. He received his medical degree from Ensworth Medical College, St. Joseph, Missouri, in 1899, and later took postgraduate work at Kansas University, Western Reserve and Creighton and at a medical school in Vienna.

* * *

LEE VERNE HILL, M.D.

Dr. Lee V. Hill, 52, a member of the Wyandotte County Medical Society, died September 13. He was graduated from the University of Kansas School of Medicine in 1919 and began practice immediately, specializing in surgery. He was a fellow of the Americal College of Surgeons.

* * *

JAMES EDWIN WOLFE, M.D.

Dr. James E. Wolfe, 53, president-elect of the Sedgwick County Medical Society, president of the Kansas Public Health Association, and director of public health in Wichita, died September 14. He was graduated from the University of Kansas School of Medicine in 1920, serving his internship at the university hospitals, and did postgraduate work in New Haven, Connecticut.

In 1922 he began practice in Wichita and became a member of the county society. He was appointed director of public welfare in Wichita in 1927 and served for two years. On January 1, 1945, he became full time director of public health and continued that work when the city and state department were combined.

Dr. Wolfe was well known throughout the state as he had been active in Society work and had served as general chairman for the annual meeting of the Kansas Medical Society in Wichita in 1946. He was a fellow of the American College of Surgeons and of the American Medical Association.

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New Doctors of Medicine

Licenses to practice medicine in Kansas have been issued to 162 persons since a list of new doctors was printed in the Journal last fall. Some licenses were issued on the basis of examinations and others were granted through reciprocity, as listed below.

By examination, December 4 and 5, 1946:

George Arack, Arkansas City
Walter L. Bell, Kansas City, Mo.
William J. Berger, DeSoto*
Hugh L. Boyd, Bristow, Okla.
Bernard A. Brungardt, Omaha, Nebr.
H. Edwin Carlson, Kansas City
Gregory A. Dahlen, Jr., Wichita
Milton Dodge, Kansas City
William H. Earl, Cottage Grove, Ore.
Edgar F. Ewen, Chanute
Edward M. Fitzgerald, Wichita
Edward H. Gibbons, Topeka
Lelond L. Holbert, Kansas City
Gordon E. Jones, Winfield
Richard L. Noonan, Arkansas City
Thomas J. Rossitto, Wichita
Henry L. Ruehr, Topeka
James E. Ryder, Omaha, Nebr.
Meyer Silvert, Topeka
William C. Weir, Jr., Erie
Herbert A. Wenner, Kansas City

By reciprocity, December 4 and 5, 1946:

Arnold H. Baum, Lansing
D. R. Bedford, Topeka
Philip W. Bernstorf, Wichita
William R. Brenner, Larned
Adrian J. Brown, Kansas City, Mo.
Joseph W. Burnett, Kansas City
Clarke T. Case, Topeka
Jesse F. Casey, Topeka
Wilbur G. Cauble, Winfield
Philip J. Clark, Kansas City
Robert A. Crawford, Hutchinson
Ernst W. Donald, Caldwell
Frederic B. Emery, Seneca
Roscoe Etter, Wichita
John P. Fairchild, Garnett
R. J. Fleischaker, Pittsburg
Tilman H. Foust, Wichita
A. H. Gottesman, Topeka
William J. Gyarfas, Kansas City
Victor G. Haury, Ottawa
Robert M. Heilman, Topeka
Carl C. Jackson, Halstead
George K. Kawaichi, Wichita
Max S. Lake, Salina
John E. Lamy, Kansas City, Mo.
Maimon Leavitt, Topeka
Ruth P. Lewis, Topeka
Frank F. Merker, Topeka
Malcolm C. Murfitt, Lindsborg
Theodore R. Pfundt, Holyrood
Roger E. Phillips, Topeka
Delbert V. Preheim, Moundridge
William E. Rapp, Kansas City
Carl H. Ruff, Clay Center
Ernest B. Scagnelli, Jetmore
Paul W. Schafer, Kansas City
Joseph M. Shearer, Caldwell
James M. Shields, Jr., Lawrence
Manuel Slavin, Leavenworth
Rolla L. Strobach, Kansas City
William L. Valk, Kansas City
Jack D. Weaver, Wichita
James C. Williams, Pratt
Walter S. Wysong, Jr., Topeka

By examination, May 1, 1947

Andre E. L. Baude, Norton
Byron L. Casey, Jr., Topeka
Herbert V. Davis, Kansas City, Mo.
Junius Hammons, Kansas City, Mo.
Richard R. Howard, Winfield
Henry O. Marsh, Wichita
Robert E. Walden, Coffeyville
Eugene A. Walsh, Herndon

By reciprocity, May 1, 1947

George H. Allison, Topeka
Joseph D. Beck, Denver, Colo.
Harrie W. Bird, Topeka
Lucius M. Bowen, Topeka
Homer L. Bryant, Coffeyville
Paul C. Christian, Pampa, Texas
Ralph F. Davis, Norton
James W. Downey, Kansas City, Mo.
John A. Fairchild, Bonner Springs
Leon F. Kinnan, Medford, Okla.
Henry H. Luster, Topeka
William B. McCunniff, Council Grove
Homer B. Russell, Great Bend
Russell T. Smith, Enterprise
Lon M. Tillman, Kansas City, Mo.
Allen B. Wheelis, Topeka

By examination, July 1, 1947

Paul D. Adams, Clay Center
Herbert M. Arnold, Kansas City
Claude D. Baker, Minneapolis
George F. Bale, Clay Center
William W. Benefiel, Medicine Lodge
Paul Bittick, Jr., Galena
Lester D. Bowles, Mission
J. Roderick Bradley, Greensburg
James G. Bridgens, Kansas City
Charles E. Brown, Stafford
Margaret Bullowa, Topeka
James W. Butin, Chanute
Roy B. Coffey, Kansas City
Calvin J. Curts, Kansas City, Mo.
Joseph W. Dennis, Kansas City, Mo.
Gordon C. Dieterich, Mount Hope
James J. Dixon, Mound Valley
K. A. Ehrlich, Coldwater
James H. Enns, Newton
Homer W. Flemming, Pratt
James W. Fowler, Kansas City, Mo.
Richard M. Fox, Salina
Wayne A. Funk, Sedan
Donald R. Germann, Kansas City
Howard R. Hancock, Troy
Robert M. Hazen, Kansas City
Clarke L. Henry, Kansas City, Mo.
Robert B. Holmgren, Kansas City, Mo.
Charles R. Hopper, Kansas City, Mo.
Hilda M. Hyort, Bonner Springs
Maurice H. Jennison, Independence
Robert S. Jones, Kansas City
Mildred I. Julius, Axtell, Nebr.
J. F. Kelsey, Osawatomie
Robert V. Kirk, Horton
Raymond W. Lance, Kansas City
Mary A. Loughridge, Wichita



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CALORIES	669	VITAMIN A	3000 I.U.
PROTEIN	32.1 Gm.	VITAMIN B_1	1.16 mg.
FAT	31.5 Gm.	RIBOFLAVIN	2.00 mg.
CARBOHYDRATE	64.8 Gm.	NIACIN	6.8 mg.
CALCIUM	1.12 Gm.	VITAMIN C	30.0 mg.
PHOSPHORUS	0.94 Gm.	VITAMIN D	417 I.U.
IRON	12.0 mg.	COPPER	0.50 mg.

*Based on average reported values for milk.

Wilson H. Miller, Wakeeney
Kenneth B. Moore, Pratt
M. Ross Moser, Kansas City
William E. Mowery, Salina
John H. Nesselrode, Kansas City
Doris G. North, Wichita
Victor North, Wichita
Erwin T. Olson, Lindsborg
Thomas R. Perdue, Kansas City
George J. Pierron, Kansas City
Lillian A. Plattner, Coffeyville
George W. Pogson, Pittsburgh
Kenneth D. Powers, Lawrence
James B. Pretz, Kansas City
James S. Reed, Salina
Edward E. Reynolds, Lanagan, Mo.
James E. Roderick, Jr., Wetmore
Robert L. Ruble, Kansas City, Mo.
Floyd A. Santner, Kansas City
Rosemary Schrepfer, Potwin
J. Leon Sealey, Salina
Donald W. Selzer, Baldwin City
Earl C. Sifers, Iola
Carter B. Sigel, Kansas City
Robert L. Stevens, Oskaloosa
William C. Swisher, Wichita
Otto W. Theel, Jr., Leavenworth
Marion A. Throckmorton, Wichita
Dana A. Tompkins, Bay City, Mich.
Donald E. Upp, Kansas City
Harold Voth, Topeka
Melvin H. Waldorf, Jr., Wichita
Sidney C. Walker, Jr., Kansas City, Mo.
Winton W. Wilcox, Independence, Mo.
Calvert J. Winter, Jr., Lawrence
Lyle E. Wonderlich, Bloomington

*Deceased.

Post-Fellowship Grants

In cooperation with accredited medical schools in the United States and Canada, the John and Mary R. Markle Foundation will inaugurate a "post-fellowship" program to aid young scholars in medical science. The program will begin in the 1948-49 academic year.

After making a survey of medical research and education, the Foundation judged that too many potential teachers and investigators are being drawn away from academic medicine, and devised a program to provide opportunities for promising scientists to develop as teachers and investigators capable of making important contributions to medical science.

Young men and women selected will be known as Scholars in Medical Science. No fixed number of scholars will be appointed in any year, but it is expected that approximately 50 will receive appointments during a five-year period. Toward the support of each scholar or his research, or both, the Foundation will set aside $25,000, payable to the cooperating medical school at the rate of $5,000 annually. Candidates will be recommended by medical schools, and the final choice of scholars will be made on the basis of these recommendations and on the recommendations of regional committees appointed by the Foundation.

The school in which a scholar is working will determine salary and academic rank and will undertake to encourage research by setting reasonable limits upon teaching and other non-research activities; it will estimate financial and other requirements for each research project.

Approved medical schools in the United States and Canada are invited to suggest names of candidates, but each school is limited to one selection. Nominations may be made to the Markle Foundation, 14 Wall Street, New York 5, New York.

The Foundation was chartered in 1927 "to promote the advancement and diffusion of knowledge among the people of the United States and the general good of mankind." An initial endowment of $3,000,000 has increased under the terms of the will of John Markle to $16,000,000, and until 1935 the Foundation made grants for purely charitable purposes. Since that time emphasis has been on grants in aid of medical research.

Vaccine for Pneumonia

Availability to the medical profession of a vaccine which makes possible the prevention of the most common types of pneumonia was announced last month by E. R. Squibb and Sons.

A single subcutaneous injection of this immunizing agent, the company reports, builds resistance to the most prevalent types of pneumococcal or lobar pneumonia. Immunity usually develops within two weeks and is effective for at least one year. Clinical reports indicate that no serious adverse reaction accompanies vaccination. The vaccine is not effective in the treatment of a person already ill with pneumonia, nor is it effective against the virus type of the disease.

This type of vaccine, solution of pneumococcus polysaccharides, has been tested clinically over a period of 15 years, during which time nearly 100,000 persons have been immunized with various types. One of the chief contributions of the Squibb laboratories was the development of a method for mass production of the vaccine at a cost permitting wide usage.

While the death rate from pneumonia has fallen markedly since the introduction of sulfa drugs and penicillin, it is still one of the most prevalent and fatal of all infectious diseases. In 1944, according to government statistics, there were about 58,000 deaths in the United States from all forms of pneumonia. This death total dropped to approximately 52,000 in 1945, but in 1946 it is estimated that it reached almost 55,000.

Solution of pneumococcus polysaccharides differs greatly from any vaccine heretofore used for establishment of immunity to disease. It is produced from the enveloping wall of the micro-organism, rather than from the body of the organism itself. It has long been known that the pneumococcus micro-organism is enclosed in a capsule which consists of a viscous, sugar-like substance referred to as a polysaccharide. In 1930, research workers at the Rockefeller Institute demonstrated than an aqueous extract of this capsular polysaccharide, when injected into a human being, produced in him the protective antibodies which create immunity to infection by the pneumococcus.

At least 75 different types of pneumococci have been isolated to date, each producing its own specific type of polysaccharide. Eleven of these 75 types, however, are responsible for 75 to 80 per cent of all pneumococcal or lobar pneumonia. Six of these 11 types cause most pneumonia in adults, while five other types, plus one from the adult group, are particularly common in children. Thus, it has been possible to combine into one vaccine those pneumococcal types which most frequently cause pneumonia in adults and older children; and into another single vaccine those types most often attacking younger children.



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Congressional Directory

Through the courtesy of the National Physicians Committee the Executive Office has received a copy of the official Congressional Directory, a book containing a wealth of information on matters directly connected with government work.

There is a biographical sketch of each member of Congress, a list of delegations by states, a roster of Congressional committees and commissions, a section of maps showing Congressional districts, a chapter on statistics, and a list of key employees of Congressmen and miscellaneous officials. A chapter on the capitol building and grounds includes telephone and office numbers for Congressmen.

The same type of information is presented for those in executive and judiciary departments and personnel in independent offices and establishments closely attached to government operation. A section on foreign diplomatic and consular officers in the United States is followed by a section on our representatives to other countries. There is also data on press and radio correspondents in Washington.

It is often difficult to obtain information of this type. The Executive Office will find the directory useful and will welcome the opportunity of providing such information to the membership on request.

Drugs Resist Price Spiral

New studies, confirming previous claims that the drug industry is resisting current inflationary price spirals, were endorsed by the executive committee of the National Wholesale Druggists' association which met in New York in September.

The studies showed that at least 4,377 items, produced by 250 manufacturers, distributed by wholesale druggists and sold in retail drug stores have remained unchanged in price since 1939. A decrease in price was reported on 697 items, and long-range price reductions were noted on such important drugs as penicillin, 80 per cent; insulin, 65 per cent; streptomycin, 15 per cent; sulfathiazole tablets, 68 per cent.

Medical Record Librarians Meet

Twenty-four members of the Kansas State Chapter of Medical Record Librarians were present at a meeting held at the municipal auditorium, Topeka, September 11. Dr. Robert H. Riedel, director of the Division of Cancer Control, Kansas State Board of Health, discussed the program of cancer control, cancer registry and follow-up service in 24 Kansas hospitals.

Medical and Dental Corps Salary Increase

An additional $100 a month will be paid to all regular Army medical and dental corps officers and to other officers serving voluntarily on extended active duty in these corps after September 1, according to a recent announcement from the office of the Surgeon General of the Army. This addition is not regarded as a pay increase by the War Department but is an equalization measure designed to bring the incomes of medical and dental corps officers more nearly in line with those of civilian doctors and dentists.

The Army will also follow a new policy of commissioning selected doctors and dentists in the regular Army in grades as high as full colonel, depending on age and professional qualifications. In the past, they have been initially commissioned as first lieutenants, except in time of war when commissions were given in grades through that of major.

These changes in the Army's medical program were made possible by legislation passed by Congress on July 26 and signed by President Truman on August 5, in the form of an amendment to the Pay Readjustment Act of 1942.

Final Edition in Preparation

The final edition of the book, "Courage and Devotion Beyond the Call of Duty," composed of official awards and citations received by U. S. medical officers during World War II, is now being prepared by Mead Johnson and Company, Evansville, Indiana.

Physicians who have not already done so are asked to write the company about awards received, sending a typewritten or photostatic copy of citations. Other information desired includes present rank or rank at time of discharge, branch of service, date medical degree was received with name of university, date of entry into service.

Omaha Clinical Society

The 15th annual meeting of the Omaha Mid-west Clinical Society will be held at the Paxton hotel, Omaha, October 27-31, inclusive. Leading the list of prominent guest speakers is Dr. Edward L. Bortz, president of the A.M.A. Eight experts in their individual fields will present round table discussions on October 31 on "What Is Being Done about the Present Problems and the Future of the General Practitioner." A symposium on "The Rh Factor and Erythroblastosis" will follow.

Programs and complete information may be secured from the secretary, 1031 Medical Arts Building, Omaha 2, Nebraska.

Society for Mental Hygiene to Meet

The Kansas Society for Mental Hygiene will hold an all-day meeting at the Municipal auditorium, Topeka, on October 23. The program will consist of three panel discussions, the National Mental Health Act and its implications for Kansas, the recent survey of Kansas psychiatric facilities, and legislative problems regarding care of the mentally ill.

Among the speakers are Dr. Paul Stevenson, head of the Mental Health Division, U. S. Public Health Service; Dr. Frederic Guild, director of the research division of the Legislative Council; Dr. Paul Ensign, Kansas State Board of Health; Mr. Erland Carlsson, state director of institutions, and Dr. Lewis L. Robbins of the Menninger Foundation.

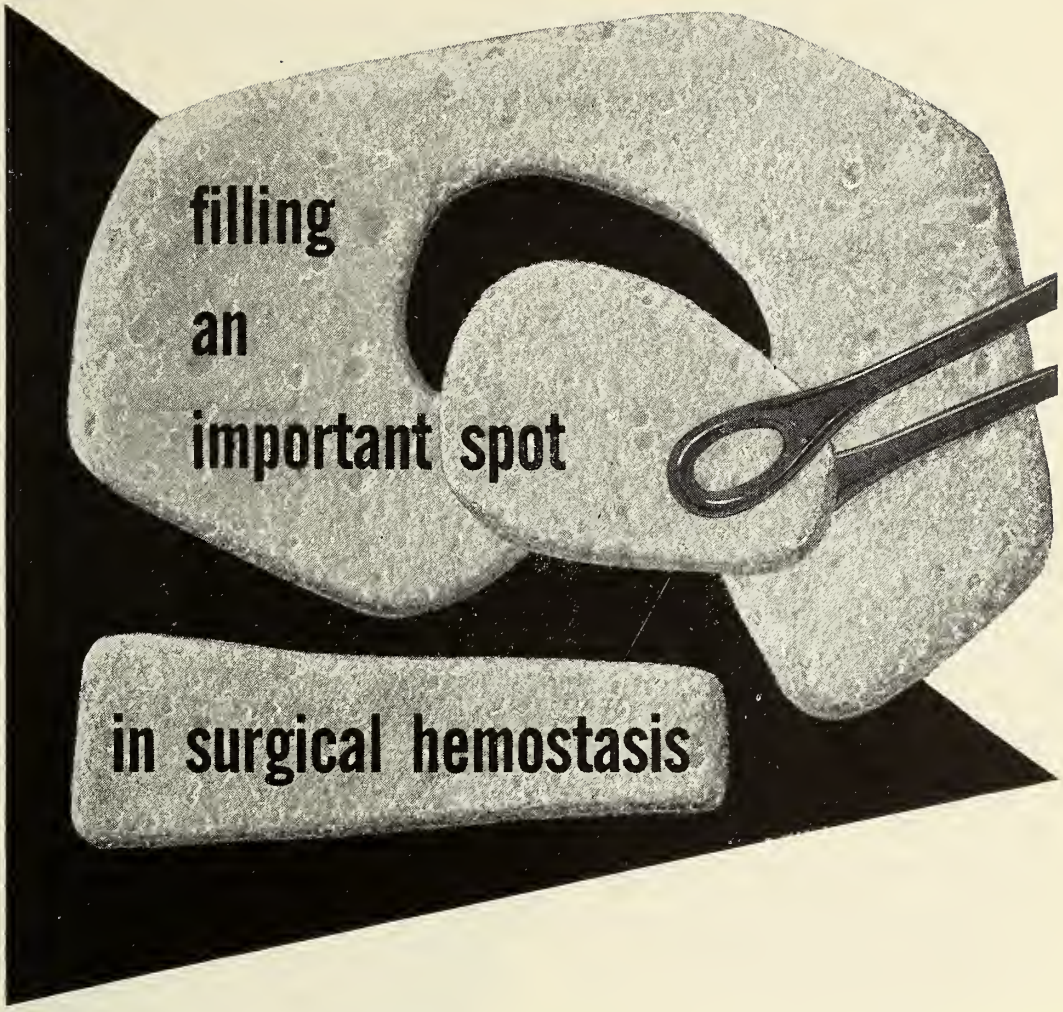
Upjohn Collection to Topeka

The exhibition of paintings by leading American artists in the Upjohn company collection has completed the second season of its tour of American museums and is now beginning a westward circuit which will include a showing at Washburn university, Topeka, in February of 1948.

Non-commissioned paintings by top-flight artists were acquired by the company to illustrate its educational health campaign, "Your Doctor Speaks." Such educational health messages were reproduced in many publications such as the Saturday Evening Post, Life, Time, Fortune, Newsweek and Parents' Magazine, to disseminate information on new developments in medicine.

Stearns Company to Pennsylvania

Operations of the Frederick Stearns and Company Division, Sterling Drugs, Inc., are now being moved from Detroit, Michigan, to a new plant at Myerstown, Pennsylvania, and the gradual moving program will be completed by January 1. Stearns executives have been invited to remain with the organization in the move.



GELFOAM* was developed by the Upjohn research laboratories to fill an important spot in surgical hemostasis. GELFOAM supplements the clamp, the clip, and the suture, affording biochemical arrest of bleeding with an absorbable organic agent which may be left in situ. This unique gelatin sponge simplifies the problem of clearing oozing surfaces, of staunching capillary bleeding, the trickling from small vessels, and the annoying hemorrhage from such tissues as liver, kidney, spleen, and tumors. In general practice, GELFOAM is an aid in the control of epistaxis, hemorrhage from lacerations, and postextraction bleeding.

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Gelfoam is made in sponges 20 x 60 x 7 mm. in size. Four sponges are packed in each jar

ABSTRACTS

Careinoma of the Breast

The Object, the Value and the Technique of Preoperative and Postoperative X-ray Treatment in Carcinoma of the Breast. Pfahler, G.F., and Keefer, G.P., S.G.O. 85: 35-46, July, 1947.

A summary of "operability" (surgically curable) and "inoperability" (surgically incurable) as defined by Hâagenson and Stout is as follows: treatment by radical mastectomy *except* (1) when carcinoma developed during pregnancy or lactation; (2) when extensive edema of skin over the breast is present; (3) when satellite nodules are present in the skin over the breast; (4) when intercostal or parasternal tumor nodules are present; (5) when there is edema of the arm; (6) when proved supra clavicular metastases are present; (7) when the carcinoma is of the inflammatory type; (8) when distant metastases are present; (9) when any two or more of the following are present—(a) ulceration; (b) edema of the skin; (c) fixation of the tumor to the chest wall; (d) axillary nodes 2.5 cm. or more diameter; (e) fixation of axillary nodes.

The authors state that it is their object to destroy only the more malignant cells which are the most sensitive and most likely to give rise to metastases.

They give the following evidence favoring preoperative irradiation: (1) tendency to devitalize or destroy the more malignant types of cells, which cause metastases; (2) normal tissues are less receptive to implantation after preoperative irradiation.

It is stated that operation should be done not later than three weeks after irradiation or regrowth of tumor cells will occur.

The experience of these authors has been that postoperative irradiation should be given within ten days to two weeks even though the wound is not healed. They have had no difficulty with delayed healing or breaking down of the wound because of irradiation.

The technique of irradiation is described.—*F.W.F.*

* * *

Diagnosis of Rheumatic Fever in Children

Stanley Gibson in Rocky Mountain Medical Journal, 44:195, March 1947.

Rheumatic fever is one of the most serious medical problems of our day. Statistics reveal that in the northern part of this country rheumatic fever is the most frequent cause of death among children of school age.

The five phenomena which, if they occur in typical form either alone or in combination, justify making a positive diagnosis are: polyarthritis, chorea, rheumatic nodules, annular erythema and rheumatic heart disease. The frequent emotional change is an essential part of the picture of chorea occasionally overlooked. The patient becomes irritable, cries easily, quarrels with his brothers and sisters, and makes himself generally disagreeable. He is frequently looked upon as a behavior problem for some time before the parents and teachers realize he is ill. The annular erythema consists of an irregular, pink, wavy line, roughly circular in outline, which does not itch. This rash comes and goes. It is usually observed in a mild type of rheumatic fever. Usually the presence of rheumatic nodules connotes a more severe form of the disease. If one hears at the apex a soft blowing systolic murmur transmitted toward the left, it is presumptive evidence of envolvement of the mitral valve.

Other phenomena seen with rheumatic fever include epistaxis, abdominal pain, anaemia, loss of weight, anorexia, tiring easily, pleurisy, and pre-cordial pain.

A child may have nondescript pains in his legs, a faint heart murmur, a slight fever, and an increased sedimentation rate, yet all these signs may occur without rheumatic fever. The pains may be in the muscles instead of in the joints. In these doubtful cases it is best to withhold judgment unless there is present one of the manifestations which has been mentioned as being a genuine part of the rheumatic picture. A diagnosis of rheumatic fever strikes terror to the heart of the parent. Hence if the diagnosis is made on insufficient grounds, one has created a psychologic situation which is difficult for both parents and patients to overcome.

* * *

Postacidotic State of Infantile Diarrhea: Symptoms and Chemical Data

S. Rapoport, K. Dodd, M. Clark and I. Syllm, Am. Jnl. Dis. Ch., 73:391-441, April 1947.

This paper reports the chemical changes and the signs and symptoms of infants with diarrhea during acidosis and following recovery from acidosis. These changes are divided into two phases, first the phase of acidosis and dehydration, during which losses of extracellular and intracellular ions and fluids occur, and second the postacidotic state during which, after correction of the deficits of extra cellular ions, depletion of the nonextracellular ions ensues because of avid uptake of these ions by soft tissues and bone.

These infants had low levels of calcium, potassium, phosphorus and phosphatase following recovery from acidosis and dehydration. The postacidotic phase of diarrhea is characterized by a clinical picture of lethargy, irritability, convulsions, respiratory embarrassment, derangements of cardiac function, intracranial and gastrointestinal hemorrhages and generalized edema. Less often classical signs of peripheral tetany, carpopedal spasm, laryngeal spasm were seen. The principal factor seemed to be due to hypocalcemia. Prematurity, malnutrition, severe diarrhea and acidosis of long duration, considerable fever, extensive dehydration and retention of waste nitrogen favor the occurrence of severe degrees of postacidotic state and hypocalcemia. Correction of the acidosis by alkalizing agents may accentuate the tendency to the postacidotic disturbance. Calcium salts have been of benefit in preventing or curing the postacidotic state of the diarrhea.

* * *

Erythema Infectiosum

M. J. Fox and John M. Clark, Am. Jnl. Dis. Ch., 73:453, April 1947.

Erythema infectiosum is an acute infectious disease found usually in children and characterized by an evanescent rose-red morbilifor eruption which spreads rapidly from the face to the extremities with no other symptoms. There is danger of exposing a child with this mild disease to virulent organisms in a hospital isolation ward.

This disease runs a course of five to six days, which may vary from three to 20 days. Normal sedimentation rate. White blood count is normal. The incubation period is probably about two weeks. The first symptom is a flushed face. The exanthem is most dense in the region of the glabella and under the eyes, the butterbly area, and creates an impression of circumoral pallor. In about one or two days the exanthem fades from the face and becomes generalized over the entire body. Frequently the rash is confused with measles. Large blotches appear on a polkadot background particularly on the extensor sur-

"Man that is born of a woman is of few days, and full of trouble." Job XIV, 1



Even in the face of great advances in medical knowledge, the lives of many infants are still literally "of few days and full of trouble," for 62.1% of the total infant mortality occurs within 30 days after birth.* During this fatal first month, every precaution must be taken to ward off troubles of early infancy.

Adequate nutrition, resistance to disease and freedom from hazardous diarrhea, colic or digestive upset all may be materially advanced by giving special attention to the first feedings.

'Dexin' has proved an excellent "first carbohydrate" because of its high dextrin content. It (1) resists fermentation by the usual intestinal organisms; (2) tends to hold gas formation, distention and diarrhea to a minimum; and (3) promotes the formation of soft, flocculent, easily digested curds.

Simply prepared in hot or cold milk, 'Dexin' brand High Dextrin Carbohydrate provides well-taken and well-retained nourishment. 'Dexin' *does* make a difference

*Vital Statistics—Special Reports Vol. 25, No. 12, National Office of Vital Statistics, Washington, D. C. (Oct. 15) 1946, p. 206.

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faces of the arms and legs. Entire course is usually afebrile. Gradually the color fades within the large blotches leaving a characteristic lattice work appearance. Leukocyte count is of no value.

Erythema infectiosum should be considered in the diagnosis of any exanthem of children appearing during the summer months.

* * *

Continuous Fever of Intestinal Origin

Burrill B. Crohn, Harry Yarris, Ann. Int. Med., 20: 858-862, June 1947.

These authors emphasize the frequency, importance, and interest of the problem of low-grade fever. They emphasize the following intestinal inflammatory processes which may be responsible:

1. Ulcerative colitis of the non-specific variety. This is usually recognized with ease because of the obvious symptoms, leading to sigmoidoscopic and x-ray studies. However, they report such a case in a young woman whose ocular complications of keratitis and episcleritis were treated over a period of years before attention was finally focused on the intestinal tract.

2. Segmental colitis. They speak of this as "right-sided" colitis because the cecum, ascending and transverse colon are most often involved. Local symptoms are usually minimal but general manifestations may be maximal. Common general symptoms and complications include continuous low-grade fever, low leukocyte count, arthritis, involving especially knee, elbow, wrist, temporo-mandibular and phalangeal and tarsal joints, and ocular disorders including keratitis, iritis, uveitis, and corneal ulcerations. Cutaneous manifestations of erythema nodosum may be present. Comment is made upon the frequent association of this disorder with chronic valvular disease of the heart. It is felt that this association is too frequent to be entirely coincidental.

3. Regional ileitis. This is frequently overlooked. A case is reported of a 12-year-old girl whose initial symptoms were fever and moderate diarrhea. Prolonged observation was negative and x-ray of the colon was reported as an "irritable colon." Finally, a barium meal showed typical regional ileitis. Resection of the terminal ileum and ascending colon was curative.

4. Diffuse ileo-jejunitis. This is described as a "baffling clinical picture," which is little known and rarely recognized. Only fever, secondary anemia, and weight loss mark the protracted clinical course. Mild abdominal pain and minimal diarrhea may be present.

The discussion is closed with a consideration of differential diagnosis. Rheumatic fever, subacute bacterial endocarditis, lupus erythematosus disseminatus, brucellosis, periorteritis nodosa, and Hodgkins disease may all be considered. The point is emphasized that intestinal fluoroscopy and reading of the films should be done by an expert in the field.—*E.J.R.*

* * *

Monoplegia from Carotid Sinus Pressure

F. D. Zeman and S. Siegal, Am. Jnl. Med. Sc., 213: 603-607, May 1947.

The classical work of Weiss and Baker is discussed. Cerebral phenomena (transient unconsciousness or syncope, convulsive movements, numbness and parasthesias generally on the contralateral side) are usually transient, but that they might be irreversible was first suggested by Galdston, Bavons, Wartis, Steet, and Taylor. J. M. Askey and others in California reported seven instances of hemiplegia following carotid sinus stimulation and in each instance the hemisphere involved was the same as the sinus stimulated. Zeman and Siegal report the case of an 83-year-old man with hypertension who developed paralysis of his right arm a few minutes after carotid sinus stimulation. They warn against free use of carotid sinus pressure in people over 50, in arteriosclerotic and hypretensive persons and advise that such patients be warned against straining and against tight neckwear on the theory that cerebral vascular accidents might result therefrom. Since digitalis, cholinergic drugs and morphine potentiate the vagal if not the cerebral effect of carotid sinus stimulation the authors quote and join Weiss in condemning free indiscriminate use preoperatively or in the aged of the above drugs, particularly digitalis. Atropine blocks the carotid reflex hence is a good drug to use in combination when the above drugs must be used.—*P.W.M.*

* * *

Penicillin in Spinal Fluid

Persistence of Penicillin in the Cerebrospinal Fluid after Massive Intravenous Administration, R. L. Barton, Lydia Marshal, T. J. Bauer and L. Lowe, Am. Jnl. Med. Sc., 214:50-52, July 1947.

Twenty-five million units of penicillin in 1000 cc normal saline were given intravenously by drip distributed equitably over 24 hours to each of 83 patients who had received 300 mg. heparin in "Pitkin menstrum" subcutaneously immediately prior to starting the venoclysis. Spinal fluid was examined on groups out of the series at the end of 5, 6, 7, 8, 9, 12, 14 and 18 hours. Using 0.01 to 0.078 unit per cc as significant levels, the authors had previously shown that penicillin can surmount the hematoencephalic barrier and appear in significant concentrations in the cerebrospinal fluid (JAMA 130, 340, 1946) in 71.5 per cent of patients receiving 10 million units in 24 hours and in 100 per cent of patients receiving 25 million units intravenously in 24 hours. The present work shows 100 per cent of fluids had significant penicillin five hours after completion of administration, 93 per cent had significant levels after six hours; 78 per cent after seven hours; 43 per cent after eight hours; seven per cent after nine hours and none had significant levels of penicillin 12 hours after completing 24-hour venoclysis.—*P.W.M.*

* * *

Theory of Carcinogenesis

Growth of Human Trophoblast in Eye of Rabbit, Its Relationship to Origin of Cancer, Gurchot, Charles, et al, S.G.O., 84:301-312, March 1947.

The fertilized ovum (which is a totipotent cell) divides by mitosis almost at once to form two tissues which thereafter remain discreet. These are: (1) the a-sexual structure or "trophoblast," which forms the *chorion,* and, (2) the sexual, or "embryo-forming" cells. One of these differentiates to form the somatic tissues of the *embryo* and the remainder comprise the *germinal stream.* Most of these latter remain confined to testis or ovary and have no further role in this discussion.

This differentiation into embryonic somatic tissue results in a lower order of potency. These cells multiply to produce further somatic structures (body tissue) but are not totipotent; i.e., they cannot produce the a-sexual or trophoblastic (chorionic) tissue. Similarly, the a-sexual trophoblastic cells cannot produce sexual (embryonic) tissue.

But as the one cell of the sexual group that is to become the differentiated somatic tissues of the embryo divides, not all of the products of this division become true somatic cells. Occasional undifferentiated cells re-



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tain their totipotency from early cleavage. Under stimuli of various sorts these may later undergo division by "meiosis" (reduction in chromosome number) to form gamete-like cells which then attempt to initiate a new life cycle with the formation of trophoblast.

It has been estimated that about two such cells are present normally in one cu. m.m. of body tissue. They have no normal function in higher animal life, although in the lower animal forms they have survival value and in that they are responsible for complete regeneration of some body structures which may be lost. But trophoblast (a-sexual tissue) is antagonistic to somatic (sexual) tissue, and such trophoblastic tissue occurring ectopically from meiosis of an undifferentiated totipotent cell as previously described results in *cancer.*

Fundamentally, all cancer is trophoblast. The specific form of the cancer is determined by the accompanying somatic tissues which limit the trophoblast cells and provide more or less differentiation into structural types —the more differentiation the greater the limitation, the less the malignancy, and the greater the physiological resemblance to the primary tissue of origin, such as the production of hormone by an endocrine carcinoma, etc. The less the imprint of the somatic tissues upon the tumor structure, the less the trophoblast is limited or "differentiated," and the greater the degree of malignancy.

Viewed in this way the distinctions between carcinoma and sarcoma and their sub-classifications are seen to depend upon the limiting somatic tissues. And all classifications merge in the highly anaplastic malignancy which is mostly pure trophoblast with a minimum of somatic limiting tissues.

All cancer, then, is viewed as trophoblast (a-sexual tissue) growing ectopically in antagonism to its host. To quote the authors: "Whereas in pregnancy the chorion is formed following the somatic tissue response of the embryo and mother to the trophoblast, cancer is formed by the tissue response of the postembryonic soma to an ectopic trophoblast."

Insofar as somatic (differentiating) cells are present in a tumor or its metastases the special physiology of the tumor is preserved, but it is a matter of common observation that in successive transplants these somatic differentiations disappear and "liver metastases from such diverse tumors as mammary cancer, hypernephroma and chorionepithelioma may be indistinguishable."

Evidence for the foregoing exposition includes the following: (1) experimentally, the authors have shown that normal human trophoblast when grown in the anterior chamber of the eye of the rabbit behaves like a malignant tumor, and produces chorionic gonadotropin; (2) antagonism between trophoblast and somatic tissues is evident in tissue cultures where trophoblast introduced along with embryonic tissues, infiltrates, erodes, and completely destroys the latter; (3) by fresh tissue techniques the trophoblast of pregnancy (chorion) is the only cell indistinguishable from cancer; (4) chorionepithelioma (pure trophoblast tumor) can occur in either sex in various tissues not related to the genitalia.

Control of normal placental trophoblast (chorion) and prevention of malignancy is attributed to a humorally mediated factor produced by the embryo and the mother. But the meiosis of a totipotent cell normally situated ectopically in somatic tissue results in trophogenesis, and an unsuccessful life cycle. "Almost invariably no adequate embryogenesis follows ectopic trophogenesis and the antithesis of the host alone being insufficient, probably through a lack of an internally secreted inhibitor of trophoblast the latter maintains its escape from the individuation field. The soma unable to destroy the ectopic trophoblast invests it if possible, thus producing a characteristic more or less malignant tumor."

SUMMARY: "Cancer appears to be trophoblastic and develops according to the following sequence: (1) persistent inflammation associated with high blood titer of carcinogens; (2) localization and concentration of carcinogenic substances at inflammation site; (3) meiosis of an ectopic diploid totipotent cell; (4) formation of a gamete-like cell; (5) activation and cleavage of the gamete-like cell is followed with formation of trophoblast; (6) characteristic malignant neoplasm produced by the somatic response of the tissue where trophogenesis has taken place; (7) maintenance and growth of tumor because of the lack of a humorally mediated inhibitor of trophoblast; (8) in primary uterine chorionepithelioma factors one to five are absent or modified by the presence of the trophoblast or the pregnancy conceptus; (9) the affinity of viruses for specific tissues brings about their own localization without a necessary previous inflammation which in fact may characterize the first stages of their invasion."

According to the foregoing explanation, cancer cannot, then, develop from normal somatic cells which are of a lower order of potency, but comes from totipotent cells normally scattered throughout somatic tissues. —*T.P.B.*

* * *

Bronchogenic Adenoma

B. M. Fried, Arch. Int. Med., 79:291-306, March 1947.

Described by Laennec in 1831 and discovered usually at autopsy until recent years, bronchogenic adenoma represented 10 per cent of pulmonary tumors in one series (MGH) and treated surgically 88 per cent of cases were living and well three to five years later while only three per cent of patients with bronchogenic carcinoma were alive for the same period. Chief threat of the adenoma which rarely if ever becomes malignant is from bronchial stenosis or obstruction and atelectasis and secondary pneumonitis. Cases are on record in which symptoms existed for decades. Cough, mucoid sputum, blood streaked sputum, wheeze, soreness on the affected side, bouts of fever, pneumonitis, bronchiectasis, abscess and empyema may appear as an adenoma advances in growth.

Bronchial adenomas occur oftener on the right (58.5 per cent cases), and are most frequently recognized between the ages 30-40 (bronchogenic carcinomas occur later), and adenomas were found oftener in women (55.75 per cent) compared to bronchogenic carcinoma (only 20 per cent in women). Bronchoscopic inspection and bronchography with an opaque substance disclose the round dense shadow with well defined borders characteristic of these benign tumors. Lobectomy is the therapy of choice and radium, forceps, electro-coagulations or aspiration are inadequate forms of therapy since the growth is hour-glass-like and only its smaller part invades the bronchial lumen—the other part expands within its capsule into the lung parenchyma. Many adenomas however are sessile and hence are easily removed bronchoscopically and usually they are easily accessible to the bronchoscopist. Early diagnosis and therapy is indicated to thwart serious complications. Case reports are given.—*P.W.M.*



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BOOK REVIEWS

A History of the American Medical Association, 1847 to 1947. By Morris Fishbein, M.D., with Biographies of the Presidents of the Association by Walter L. Bierring, M.D., and Histories of the Publications, Councils and other Official Bodies. Published by W. B. Saunders Company. 1226 pages. Price $10.

Someone has said there is no such thing as history. That what has been passing as history is, in reality, biography and autobiography. And this very inclusive and important work by Dr. Fishbein and his associates makes a strong case for the affirmative. It is a biography of the American Medical Association by Morris Fishbein, M.D. And between the lines, and around and about them, is the charm of Dr. Pepys' Dairy, which, of course, is autobiography.

It is a large volume, 1185 pages, and the appendices and indices make it 1226. It is not a book for an evening's reading, rather one for weeks of perusal, and then a reference work for many years to come. It should be in the home of every physician in Kansas.

It is the official story of American medicine. Every physician in our United States, and that is all of us, has been, and is a part of it. Compare the standards of 1847 with those of today, and we have a general idea of what the men and women of United States medicine have contributed to the comfort and bettering of life and living.

The span of life has more than doubled; cholera, malaria, yellow fever, bubonic plague, typhoid, diphtheria, small pox, measles, whooping cough, scarlet fever, to mention only a few diseases, have disappeared, or are disappearing from our country; pernicious anemia, diabetis, and venereal disease are controlled, and the occurence of, and deaths from tuberculosis have been decreased by 90 per cent. The entire practice of surgery has been developed in this period.

The publications of the Association for both professional and lay information surpass any in the world. The United States is better informed today in both the prevention and the cure of human ills than any other nation.

It is, indeed, an inspiring story of human endeavor, over the road of experience. Medicine, by far, and in the main, has concerned itself with the bettering of the health of all the people, and of the cure of disease when it occurs. And it's a pretty decent story of unselfishness and accomplishment. From the farm boy "fixing a rail fence" in the spring of 1833, to the medical profession of today, is a short time in years, but so very much more has been done in medicine in this time than in all the millenniums before it. And you and I as individual physicians have been, and are, a part of it. We can know and see ourselves by placing this book in our homes, in the libraries of all medical schools and hospitals, and in every public library in the land.

Very certainly the American Medical Association is not a perfect organization. It was made by men, and continued by men. And who of them is perfect? The first 85 years of this period was concerned almost altogether with improving the science and practice of medicine. Then almost without warning, out of a clear sky, appeared the cloud of social and economic problems in which physicians now must interest themselves. Some of them may be artificial, but most of them are very real. Both the profession and the public at large are divided as to what should be done, and how.

"The History" does not include much concerning the full activity of the Board of Trustees. It is included, perhaps by omission. But much of the "File" of medicine, and considerable of the "Rank" are in disagreement with the trustees. The following paragraph is NOT from the book. It represents this writer's own thought.

In the present set up, The Board of Trustees is very nearly an all powerful group. It is almost self perpetuating, and its dictatorial and often arbitrary actions do not include much change from former days. If you want a change it will have to come from the basic units, the county societies, and the next higher units, the state societies. You, its individual physicians, never before burdened with politics, will have to concern yourselves at "Grass Root" levels, if you believe that change should come. And THIS story will be a part of the next history of the Association. What it will be depends on the younger war-released physicians, who just now are taking up active work. Socialized medicine, or whatever takes its place, should not be decided by the trustees, but by the county and state societies, and the House of Delegates.

Dr. Fishbein in writing this book is very deserving of the gratitude of all medicine. It is a factual, true story of the development of folks of whom you are a part. He deserves the thanks of all physicians for his work. I'll venture he would appreciate a line from you to tell him so. He deserves it.

Walter L. Bierring, M.D., himself a past president, has written a short biography of all the presidents of the Association during this 100-year period. This work in itself is a biography of medicine, and is a valuable and informative part of this book.—*A.K.O.*

* * *

Fundamentals of Clinical Neurology. By H. Houston Merritt, M.D., Fred A. Mettler, M.D., and Track Jackson Putnam, M.D. Published by the Blakiston Company, Philadelphia. 289 pages, 96 illustrations. Price $6.00.

A neurology text book that is brief, concise, well illustrated and organized is hard to imagine on 260 pages with large print and glossy paper that makes easy reading. Traditions about neurology books lead one to expect a ponderous volume, in heavy style and fine print, and with erudite discussions of obscure entities. However, this book is a real contribution to medical students and general practitioners and neurologists, as it deals, as the title indicates, with fundamentals.

In the introduction I was pleased to see the authors' ideas about methods of diagnosis and examination, with particular reference to the need of physical neurologic and psychiatric study before considering special diagnostic procedures. In spite of the authors' emphasis on psychiatric evaluation in arriving at a neurologic diagnosis, the psychiatric or mental exam is given only cursory and occasionally naive attention.

The main features of this book are its condensations of complex phenomena, the lucidity of its illustrations, the brevity of reliable and specific knowledge of syndromes, and the conspicuous avoidance of vague and controversial points.

Treatment, unless it is highly specific, is not mentioned, but this has an advantage. However, the book suffers from some imbalances in discussion of material, some being given disproportionate space in relation to clinical importance. Likewise, neuroanatomic emphasis with complicated illustrations for an elementary text book, tends to displace clinical features at times.

There are two parts to the book. Part I deals with history taking, general physical examination, neurologic examination and excellent outlines for each. This is fol-

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lowed by systematic examination of the cranial nerves, the motor system, sensory system, speech and other higher cerebral functions, and the comatose patient.

Part II deals with neuroanatomic diagnoses but with some unusual organized features. Instead of etiological categories and arrangements, anatomical features persist. This greatly simplifies matters for the student and busy practitioner in locating pertinent data. The peripheral nervous system, spinal cord, infratentorial brain stem, cerebellum, thalamus and corpus striatum, and cerebral cortex are concisely discussed with due regard to all possible syndromes. However, notably lacking is the pertinence of psychological findings in lesions of the cortex, and particularly the value of diagnostic psychological tests in organic cerebral syndromes. Lastly, an excellent diagnostic chapter on the cerebrospinal fluid, and its various syndromes completes this delightful volume. The authors have set a new mark in neurologic textbook writing, and I highly recommend this book to all practitioners who are interested in neurologic problems.—*H.H.C.*

* * *

New and Nonofficial Remedies, 1947, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1947. Cloth. Price, postpaid, $3.00. pp. 749. Philadelphia: J. B. Lippincott Co., 1947.

The book is now published by J. B. Lippincott and Company, though it is still issued under the direction and supervision of the Council on Pharmacy and Chemistry. Another innovation is the relegation of the statements of tests and standards to the back of the book, which makes the text more convenient and useable for the physician, for whom it is primarily intended. It is understood that supplements to the annual volumes will no longer be issued. The physician who is interested in current acceptances can keep track of these as the descriptions are published in the Journal A.M.A., or may inquire about them by addressing the Council's office at A.M.A. headquarters. Several medical and pharmaceutical journals now carry lists of currently accepted products.

There appears to be no very extensive revision in the various general articles or chapter head discussions, although several new monographs have made their appearance and others have been revised to reflect current medical opinion. One notes the appearance of a new chapter, "Unclassified Therapeutic Agents," which includes the monographs on gold compounds and iodine compounds for systemic use. This is in line with the policy adopted some years ago of classifying accepted preparations according to pharmacologic action and therapeutic use.

Attention is called to the amplification and indexing of the section devoted to the statement of the Council's rules. This should be of great assistance to manufacturers in the presentation of products for Council consideration and is no doubt inspired by the recent marked increase in the number of pharmaceutical concerns asking Council recognition.

The descriptions of some thirteen new preparations appear in this volume. This excludes, of course, brands or dosages of already accepted agents. One notes the increasing appearance of generic designations in conformance with the revised Council's rules on acceptance of agents bearing protected or trademarked names.

New and Nonofficial Remedies remains a most valuable and authoritative compendium of modern rational therapeutics. With successive editions, it becomes more useful and accessible to the physician and to all those interested in the use, preparation, or manufacture of drugs.

* * *

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1946. Cloth. Price, postpaid, $1.00. pp. 135 Chicago: American Medical Association, 1947.

This volume was formerly of most interest to those who wished to know why the Council on Pharmacy and Chemistry had not accepted certain of the preparations it had considered. The reports were mainly those of rejection; though, through the years, the educational nature of the Council's work was attested by status reports on drugs, or therapeutic procedures, or preliminary reports on agents showing promise of usefulness but not yet ready for adoption by the general and medical profession. In recent years, the tendency has been toward a preponderance of the educational type of report. In the present volume, both the condemnatory and the educational phases of the Council's work are represented.

Among the status reports, the excellent article of Dr. Samuel M. Feinberg, "Histamine and Antihistaminic Agents," is probably most worthy of mention. Since its appearance, the Council has accepted for inclusion in New and Nonofficial Remedies, the two new agents of this class evaluated in the article, Diphenhydramine Hydrochloride, and Tripelennamine Hydrochloride (Benadryl Hydrochloride and Phyribenzamine Hydrochloride, respectively).

Pharmaceutical and scientific investigators, alike, will be interested in the informative report on the Council's new Therapeutic Trials Committee. Of special interest to manufacturers is a statement on the revised rules of the Council, though this exposition of the trends of Council policy is of concern to all who are interested in progressive rational therapeutics.

Attention is called to the several reports on the adoption of generic designations for drugs proposed or marketed under protected names. Not all such actions of the Council have been the subject of separate published reports; the recognized terms have appeared in the published descriptions of the drugs when accepted, and will be inserted in another Council publication, New and Nonofficial Remedies, as adoption of such designations for already accepted protected names proceeds.

Books Received

Gifford's Ocular Therapeutics, Fourth Edition. Revised by Derrick Vail, M.D., F.A.C.S. Published by Lea and Febiger, Philadelphia. 336 pages. Price $5.00.

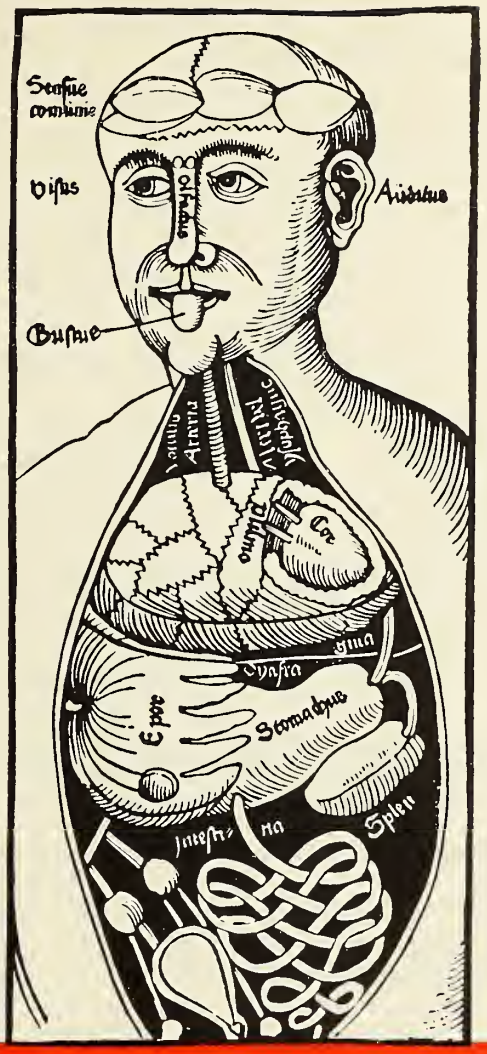
Internal Medicine in General Practice, Second Edition. By Robert Pratt McCombs, B.S., M.D., F.A.C.P. Published by W. B. Saunders Company, Philadelphia. 741 pages, 122 illustrations. Price $8.00.

American Illustrated Medical Dictionary, 21st Edition. By W. A. Newman Dorland, A.M., M.D., F.A.C.S., member committee on Nomenclature and Classification of Diseases of the A.M.A. Published by W. B. Saunders Company, Philadelphia. 1660 pages, 880 illustrations. Price $8.00 without thumb index, $8.50 with thumb index.

Overcoming Stammering. By Charles Pellman. Published by Beechhurst Press, Inc., New York City. 160 pages. Price $3.00.

Fundamentals of Psychiatry. By Edward A. Strecker, M.D., ScD., LL.D., F.A.C.P. Published by J. P. Lippincott Company, Philadelphia. 325 pages. Price $4.00.

The Practical Nurse. By Dorothy Deming, R.N. Published by the Commonwealth Fund, New York. 370 pages. Price $3.00.



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December 6-11—Sixth Annual Meeting, American Academy of Dermatology and Syphilology, Chicago. Principal sessions at Palmer House, courses at medical schools of University of Illinois, Northwestern University.

December 15-17—Annual Convention, American Academy of Allergy, Hotel Jefferson, St. Louis, Missouri.

January 5-8—Midwinter Meeting, House of Delegates, American Medical Association, Cleveland, Ohio.

January 7-8—Scientific Session for General Practitioners, American Medical Association, Cleveland, Ohio.

April 19-23, 1948—Twenty-ninth annual session, American College of Physicians, Civic Auditorium, San Francisco, California.

May 6-8, 1948—Annual Meeting, American Association for the Study of Goiter, King Edward Hotel, Toronto, Canada.

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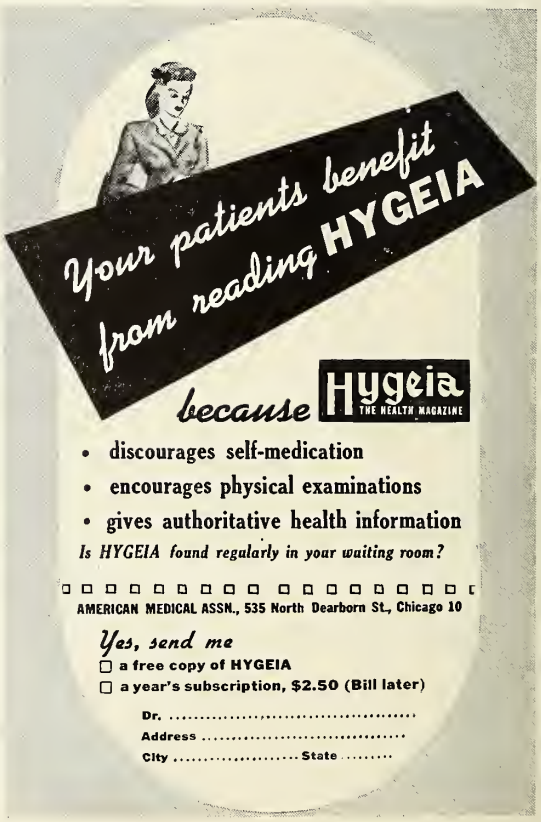
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DIVERTICULOSIS AND DIVERTICULITIS OF THE COLON*

Philip W. Brown, M.D.**
Rochester, Minnesota

Sacs of the colon may be either exceedingly serious problems or they may be simply matters of anatomic interest. Many people have diverticula of the colon. The incidence varies with the age group examined. Morton[1] reports an incidence of 15 per cent in 8,500 necropsies, while Kocour[2] found 1.9 per cent in 7,000. At the Mayo Clinic the figure is 8.5 per cent for the patients examined roentgenologically and five per cent for the cases in which necropsy is performed. These figures must all be considered in terms of age, for we know that diverticula of the colon are rarely seen in persons under the age of 30 years, that four per cent are encountered in persons between the ages of 30 and 40, and that approximately 95 per cent occur in persons 40 years of age or older.

Physicians are familiar with outpouchings all along the gastro-intestinal tract from throat to anus; these outpouchings appear more frequently as the lower part of the bowel is reached. Benson, Dixon and Waugh[3] observed 122 instances, from 1909 to 1942, inclusive, of small intestinal diverticula, exclusive of duodenal and Meckel's diverticula. In various studies a two per cent incidence of Meckel's diverticulum has been noted. Any of these sacs may provoke serious trouble but aside from Meckel's, it is odd how few cases of active diverticulitis occur except in the colon and esophagus.

Diverticulitis of the colon usually means that this disease is in the sigmoid and perhaps the descending colon so that most reports are based on active disease in this segment of the bowel. Occasionally one encounters acute diverticulitis in the right portion of the colon. As the onset of acute diverticulitis in such instances is almost always severe and the symptoms point to an acute process in the right side of the abdomen, exploration is undertaken. Such cases are rarely recognized preoperatively. For this discussion I shall conform to the custom of considering diverticulitis as chiefly a disease of the sigmoid colon.

Uncomplicated diverticulum of the colon or diverticulosis constitutes the lesion in the vast majority of cases in which these sacs are found. In one study of diverticula Marcley and I[4] observed that of 1,100 consecutive cases which occurred from 1919 to 1928, inclusive, 10 per cent of the patients underwent operation and 25 per cent were classified as having medical diverticulitis, which left 65 per cent who were merely possessors of diverticula.

In a recent surgical study of this disease Pemberton, Black and Maino[5] found recorded, in a five year period from 1941 to 1945, inclusive, 6,000 instances of colonic diverticula; 2.4 per cent of these patients underwent operation, 13.1 per cent were classified as having medical diverticulitis and the balance, or nearly 85 per cent, were merely possessors of the sacs. Why should there be this difference in the two series of cases? The fact that a greater percentage of patients in the latter series were examined roentgenologically, as well as the fact that a more critical recording of all diverticula was made in the latter series, even though there was no evidence of active disease, explains much of this great difference. This brings out the fact that one cannot state definitely in what percentage of cases diverticulitis will develop or in what percentage operation will be required. The age group studied, the diagnostic criteria of the roentgenologist and the number of patients examined are factors which will affect tremendously the relative numbers of cases of diverticula of the colon in the three divisions referred to in the two series of cases already mentioned.

Why do approximately 10 per cent of persons over the age of 40 years have diverticula? It must be that these lesions develop at or beyond this age since

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**Division of Medicine, Mayo Clinic.

so few are encountered in earlier life. The theory that has seemed logical to me is that they are herniations of mucosa through defects in the bowel wall at either the site of perforating vessels or at any point in the wall. It is conjectural that other factors such as aging, pressure or weight may contribute. Possibly some congenital defect in the bowel musculature may be at fault. It is not uncommon to find two or more instances in a family and Schlotthauer[6] has even reported the occurrence of diverticula in seven brothers, while the two sisters had no diverticula.

Since it is impossible to state that any certain number of patients with diverticula will suffer from diverticulitis nor, of the latter group, how many will require operation, it means that one should consider three subdivisions of the problem: (1) diverticulitis controlled by medical measures, (2) diverticulitis which requires surgical intervention and (3) diverticulosis.

DIVERTICULITIS CONTROLLED BY MEDICAL MEASURES

When one or more of the sacs become diseased the symptoms are usually those of pain in the lower or left lower part of the abdomen associated with constipation in about five-sixths of the cases and with diarrhea in the remainder. Nausea and vomiting are less striking symptoms unless considerable obstruction and peritoneal reaction exist. There is mild to moderate fever and leukocytosis is present. In other words the common signs of an inflammatory process whose actual source is merely suggested by some bowel dysfunction and by the site of the pain are manifested. Bleeding from the bowel in this group or any other group of patients with diverticula of the colon must be attended by a very low threshold of suspicion. I am even reluctant to admit that gross bleeding is due to diverticulitis. This may not be wholly correct but it is certainly the safer attitude to adopt.

Sigmoidoscopy is not only of distinct supplementary aid from a negative viewpoint but does afford definite contributory diagnostic assistance. Jackman and Buie[7] list the following five signs that are strongly suggestive of diverticulitis: (1) limited mobility of a segment of the bowel that is normally freely movable, (2) angulation of the upper part of the rectum due to inflammation, (3) reduced lumen and adherent mucosal folds, (4) sacculation of the sigmoid and (5) actual visualization of the diverticula. Of 242 consecutive patients with diverticula of the colon which they examined, they found one or more of the foregoing signs in 66 per cent and in 35 instances in this group they saw the diverticula.

The barium enema is the most helpful aid in establishing the diagnosis. The findings are obvious in many instances but in others there may be more than reasonable doubt as to the diagnosis and a coexisting carcinoma may be suspected. While there is now only historical interest in any relationship between diverticulitis and cancer, yet the problem of making a simple differential diagnosis in some cases is far from being a simple one. Every physician has been confronted with this question and no one more so than the roentgenologist. It would be presumptive on my part to discuss the various points that the roentgenologist must consider, and often the final decision must depend on the evaluation of both clinical and roentgenologic data.

Treatment—This is relatively simple. Since rest of an inflamed part is important for recovery, the patient must stay in bed until the infection has subsided. Actual physiologic rest is not accomplished but is the only way short of disconnecting the bowel. As a general rule the patient should remain in bed from two to three weeks. Next to rest is heat and the best method is diathermy, with the electric pad and hot packs as second and third choices. The latter are heavy, quickly become cool and are the least desirable. Occasionally a patient will get much more comfort and seem to do as well by using ice bags instead of heat.

Hot saline rectal irrigations are of doubtful value and usually seem to cause more commotion than comfort. One may use a small saline enema or a retention enema of oil when it is necessary to aid elimination. If the patient is not too ill and can safely ingest liquids, it is of value to give a sulfonamide drug, preferably one which is absorbed at a relatively low rate such as sulfasuxidine or sulfathaladine. A dose of two gm. every four hours is suggested. Rarely in patients who will respond to medical measures is it necessary to give parenterally such drugs as sulfadiazine or penicillin.

At the onset the degree of distress, the abdominal findings and the general status of the patient will determine whether to permit oral use of fluids or to tide the patient along for a day or more with intravenous injection of solutions. As a rule liquids can soon be taken orally and food gradually increased to a reasonably normal intake.

Rather early in the treatment I like to have the patient take daily a small dose of mineral oil, that is, not over an ounce and maybe less. Such treatment administered between 9:00 and 10:00 p.m. will certainly not interfere with absorption of fat-soluble vitamins and the small dose is less likely to leak. Other than medication to relieve pain or promote rest, additional treatment is seldom required.

What is the outlook for the patient whose initial attack has subsided? Marcley and I found that 137, or 63 per cent, of 218 patients were well; of these 137, 106 had been well for five or more years. Of the 81 patients, or 37 per cent, in whom the results

were considered as unsatisfactory, 60, or three-fourths of this group, had carried on with relatively little disability due to diverticulitis. As will be apparent in the next section, our present attitude would certainly be to urge operation in probably a fourth to a half of the patients in this less satisfactory group.

Can it be stated how many patients with medical diverticulitis might expect to require surgical intervention? From the preceding data one might hazard the comment that 21 of the 218 patients, or 10 per cent, should have been operated on. I think it reasonable to tell the patient whose initial attack subsides that he has about four chances in ten of some further trouble and about one or two chances in ten that an operation may be required.

DIVERTICULITIS WHICH REQUIRES SURGICAL INTERVENTION

In patients with diverticulitis who will require operative intervention the onset of illness is more severe and intense than in nonsurgical patients. They are usually sicker at the onset, there is minimal abatement of distress and, even though the process may show some temporary response to treatment, active trouble continues due usually to perforation into the bladder, through the abdominal wall or into neighboring structures. The picture is more than just that of pain, bowel dysfunction, fever and leukocytosis, for there is more tumefaction than in patients in the medical group, and other curious symptoms may be noted. Everything is more dramatic than in the patients in the medical group.

All this is the picture of complicated diverticulitis, as opposed to uncomplicated or medical diverticulitis. The greater severity of symptoms in patients of the surgical group usually implies perforation with resulting increase of local and systemic reaction. Pemberton and co-workers emphasize this characteristic of the more intensive onset of the disease. In their study of 389 cases of diverticulitis of the sigmoid, 12 per cent of the patients were operated on within one month and 31 per cent within six months after onset. In their series, 42 per cent of patients had either fistulas from prior exploration or spontaneous fistulas into the bladder or through the abdominal wall. The voiding of gas (pneumaturia) is practically certain proof of a fistula into the bladder.

A curious reference of pain in some cases often occurs. I have seen instances of severe pain in the lower part of the abdomen with radiation down the front of the thigh. This proved to be due to perforation and extension into the psoas muscle. Perforation of a single or solitary diverticulum with no evidence of bowel involvement, as seen by roentgenologic study, is rare. Pain in the hip or toward the back, fever and leukocytosis with little or nothing else, may be all one has on which to base a diagnosis. I know of no way to be certain in such a case other than to know that such may occur. We are all aware of the frequent diagnostic confusion which arises in cases in women, when so often a pelvic mass is mistaken for disease of the adnexa. Particularly is this more likely to occur when there are minimal symptoms of bowel dysfunction.

Treatment—Formerly the risk of surgical intervention in these seriously infected and complicated cases was high. Since the advent of sulfonamide therapy there has been a striking decrease in the operative mortality. This has been reported by Pemberton and co-workers and for the following surgical data I am indebted to their report. In their group of 245 patients treated before sulfonamides were available the over-all operative mortality rate was 14.7 per cent, while in their group of 144 patients treated after sulfonamides were available the mortality rate was 4.2 per cent.

The question is frequently asked whether one should close a colic stoma without first removing the segment of the colon which is the site of the diverticulitis. Even though one delays six or more months with the hope that the reaction will subside, the chances for ultimate success are poor. In 38 instances of closure of the colic stoma, there were two postoperative deaths and 23 of the surviving 36

TABLE 1

Incidence of postoperative deaths of patients with diverticulitis treated before and after the sulfonamides were available

Operation	Before sulfonamides		After sulfonamides	
	Cases	Deaths	Cases	Deaths
Colostomy	117	6 (5 per cent)	89	1 (1 per cent)
Colostomy, later exteriorization	22	3	41	0
Colostomy, later resection and anastomosis	24	4	20	1
Exteriorization	76	13	38	1
Primary resection and anastomosis	18	2	10	0
Total resections	140	22 (15 per cent)	109	2 (2 per cent)

patients had recurrence of the diverticulitis. Hence it would seem that once surgical intervention is undertaken, it should be with the likelihood that resection will be necessary. Likewise excision of a perforated diverticulum or of a fistulous tract was found to have but a 50-50 chance of success, which further emphasizes that resection is definitely the method of choice.

It has been demonstrated that surgical procedures can now be carried out with a relatively small risk (Table 1). Hence there should be much less reluctance to advise operation, not only in the more obvious cases but likewise in the 10 to 15 per cent of medical cases that we have previously discussed as those in which unsatisfactory medical results are obtained.

DIVERTICULOSIS

As previously noted, at least 65 per cent, and probably 85 per cent, of patients in whom diverticula are found merely have diverticula. It is obvious that the vast majority of patients simply have diverticulosis. Are they likely to suffer from diverticulitis? May the sacs be the explanation of some of the vague gastro-intestinal complaints? Do they explain diarrhea in those cases in which there is no other objective finding? Certainly to all three queries one may reply, "Yes, but most unlikely." In a group of 220 patients with diverticulosis who were subjected to follow-up study,[4] only one was thought to have later suffered from diverticulitis, which occurred nine years after the condition had been diagnosed; this patient died after operation. In no others of this group was there evidence then or in the follow-up study which would warrant ascribing trouble to the diverticula. There is no intent totally to dismiss diverticulosis as a nonentity but these observations do impress one with the need for caution in attributing complaints to diverticula which happen to be discovered on proctoscopic or roentgenologic examination.

These patients should always be informed of the finding of the diverticula and that these sacs are relatively frequent in people over 40. Likewise it is proper to explain that symptoms of diverticulitis may develop, although the chances are very small that such will happen. They should be instructed that it is good judgment to observe two simple rules that may minimize diverticulitis; namely, "Don't eat cinders" and "Take a swallow of mineral oil at bedtime." People seem to remember "cinders" as a key word and it helps them to avoid nuts, popcorn, bran and big seeds.

CONCLUSIONS

1. It continues to be my opinion that fate or some curious factor is associated with diverticula of the colon. A few patients are seriously sick (surgical diverticulitis), more are mild to moderately distressed (medical diverticulitis), while the vast majority seem to escape with no trouble at all (diverticulosis).

2. Medical treatment of diverticulitis is effective in about 63 per cent of cases. It is fairly satisfactory in 27 per cent, while it is unsatisfactory in 10 per cent.

3. Since the advent of sulfonamide therapy, the surgical risk in cases of diverticulitis has markedly decreased. Certainly there should be less reluctance to advise operation in all cases in which the condition is not readily controlled by medical measures.

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STERILITY*

Rodger A. Moon, M.D.

Emporia, Kansas

The subject of sterility is much too broad to hope to cover in a short paper of this sort, and therefore I propose to, first, outline a routine of investigation which I consider practical for the average practitioner in this community; and, second, to touch on a few aspects of treatment.

I should say at the outset that I make no claim to special training or experience in this field, and my remarks are based principally on a study of the literature. However, sterility is a subject in which I have been extremely interested for several years.

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GENERAL CONSIDERATIONS

Sterility may be simply defined as the inability of a couple to achieve a pregnancy in two or three years time, and it is estimated that from 10 per cent

to 15 per cent of married couples find themselves in this predicament.

The word "couple" in the above definition should be emphasized because it is only in comparatively recent times that it has been appreciated, at least by us males, that it could be the male partner who is responsible for some of these sterile matings. As a matter of fact between 20 per cent and 50 per cent of cases have been found to be wholly, or in part, due to defects in the male,[10] and most authors agree that male infertility accounts for about one-third of cases.

It should be emphasized that, in the majority of cases of childlessness, the term, "subfertility," more aptly applies than does the term, "sterility," and that this subfertility is usually due to a combination of several defects in one or both partners.[11]

EXAMINATION

As in almost all things medical, the first step in evaluating the problem is a careful history and physical examination, in this instance, of both husband and wife.

In taking the history the past illness should be especially investigated. Pillay[13] stresses the point that, "oligospermia, and similar conditions occurring in adult life, are produced by non-endocrine factors which damage the epithelial cells of the seminiferous tubules—especially such febrile illnesses as typhoid and malaria, and such conditions as alcoholism."

At this time also the physician may inquire into the sexual habits of the couple and correct any faults in marital techniques which, because of ignorance, may be contributing to the infertility.

The physical examination should include an appraisal of the nutritional and endocrine status of the couple. Hypothyroidism appears to be a frequent finding in these patients, and most men include small doses of thyroid in their therapy. A search for foci of infection, and, of course, a careful examination of the prostate and testes of the male, and the pelvis of the female, are important parts of the examination.

In this connection, Gardner[9] states that uterine displacement is rarely a cause of sterility. I recall three cases of pregnancy in primiparae that presented themselves in one week at the Dependents' Clinic at a Naval Station where I served. All three had markedly retroverted uteri. Many authors list endocervicitis as a frequent factor in sterility, and it is probably one of the easiest to correct.

SEMEN EXAMINATION

The next step is an examination of the husband's semen. Most authorities agree that the specimen should be obtained after three days continence, either by masturbation, or by coitus interruptus, with ejaculation into a clean, dry, wide-mouth bottle. The patient should be cautioned against losing the first part of the ejaculate, as most of the sperm are found in the first one-third of the specimen. The specimen should be examined within two hours and need not be kept warm, or at body temperature, during this interval.

The technique of semen examination is not difficult and can be done in the average doctor's laboratory by the doctor himself or his technician. A few comments on the various features of the examination are in order:

With regard to volume, the average is from 2.5 to 6 cc. Adams[9] considers anything below 0.5 cc. as definitely abnormal.

Viscosity is of some importance and may be estimated between the thumb and index finger,[14] the normal specimen stringing out slightly when the thumb and forefinger are separated. An abnormally viscous specimen acts as a mechanical barrier to the sperm, and they soon exhaust themselves attempting to pass through it.

Seventy per cent to 90 per cent of the spermatozoa, as viewed on the slide under a thin cover slip, should be motile and should retain their motility for from 18 to 24 hours.

The normal sperm count is in the neighborhood of 100,000,000 per cc., with most authorities accepting a count of under 60,000,000 per cc. as being pathologically low. Walker[6] states that the percentage of abnormal forms is more important than the count, and Hotchkiss[14] examined the semen of 200 men whose wives were pregnant and found counts as low as 2,250,000. In 25 per cent the count was below 60,000,000. Most authorities agree, however, that a normal sperm count is most important, and that patients with counts below 60,000,000 are essentially sterile.

The sperm count can be done easily with the ordinary white blood cell pipette and red blood cell counting chamber, using five per cent sodium bicarbonate solution with one per cent phenol as a diluting fluid. The finding of a low count calls for repeated examinations before being accepted as significant.

Finally a thin smear should be made of the specimen, stained, and examined under oil immersion to determine the percentage of abnormal forms. The finding of 25 per cent abnormal forms is given by Bellingham[16] as the lower limit of normal. There are numerous staining methods that may be employed, most of them complicated, but the ordinary gram stain is adequate for most practical purposes.

In many cases a testicular biopsy—which can be a simple office procedure[16]—should be done to determine whether the absence of sperm is due to obstructive causes or to testicular dysfunction.

Regardless of the findings in this part of the examination, i.e., the examination of the male and his semen, it is not a good policy to tell the patient that he is sterile. Such a statement causes considerable psychic trauma, and, should his wife somehow become pregnant, domestic complications are likely to ensue. It is better to tell the patient that he is of low fertility.

BASAL TEMPERATURE RECORDS

Providing the male partner is not found to be of such low fertility that further investigation seems useless, I believe the next step should be the instruction of the wife in keeping a daily basal temperature record. The temperature may be taken either orally or by rectum. In either case the temperature should be taken immediately upon awakening for four minutes and recorded on a special graph. (Figure 1). On this graph are shown the days of the menstrual month (the first day of menstruation being the first day of the menstrual month), the corresponding days of the calendar month, the days of menstrual flow, days of illness or indisposition, and any unusual happenings. Coitus is indicated by a circle drawn around the point marking the patient's temperature for that day. I have been using ordinary graph paper from the dime store for these graphs, and it serves the purpose very well.

When such a record is carefully kept, it has been found that during a normal menstrual cycle the basal temperature shows an appreciable drop 24 to 36 hours prior to the onset of menstruation and continues at this low level until the mid-menstrual period. Then there is usually a further sharp drop, followed by a rise to the premenstrual level, this level being maintained until 24 to 36 hours before menstruation begins again.

Ovulation is said to occur at the time of the sharp drop in temperature preceding the rise to the premenstrual level. It is interesting that if pregnancy occurs the premenstrual temperature level is maintained for several months—thus constituting an early indication of pregnancy. The patient is taught to recognize the ovulatory rise in temperature, and to quote Davis,[7] "to have intercourse as her temperature drops preceding the ovulatory rise, as it rises, and when it first reaches its post-ovulatory peak." In several instances such a chart has also been useful in picking up the cases of too frequent intercourse scattered throughout the cycle, rather than concentrated efforts at the time of ovulation. Davis[7] states that basal temperature records are reliable indexes of ovarian activity in three out of four women.

BASAL METABOLIC RATE DETERMINATIONS

A basal metabolic rate determination should be done on both the husband and wife, although, in some cases, I feel that this test may be omitted inasmuch as small dosages of thyroid may be safely given to most patients, and most authors recommend thyroid as good empirical therapy. Nicodemus and Ritmiller[18] found 47.7 per cent of the women in their sterility series of 76 cases to be hypothyroid.

THE HUHNER TEST

The Huhner test, or post-coital examination of the aspirated contents of the vagina and cervix for spermatozoa, is important, although it should not be used to take the place of the semen examination. Siegler[17] says, "The finding of actively motile sperm in the cervix in a particular case determines whether the cervix is in the correct position to receive spermatozoa—irrespective of the size of the vagina, position of the uterus, size of the penis, or any other abnormalities of the organs of reception and delivery." Normally two hours after coitus 10 per cent of the spermatozoa are alive in the vagina, and five or more motile sperm per high power field will be found in the cervical mucus. The Huhner test should be performed at about the time of ovulation, and within two hours after coitus. Repeated failures to find actively motile sperm in the cervix indicate either a failure of delivery of sperm or a failure of reception. Refractory cervical secretions—as from endocervicitis—or an anatomic defect in the female would account for a failure of reception.

TESTS FOR TUBAL PATENCY

The preceding examinations having revealed no definite, absolute basis for infertility, the fallopian tubes should be tested for patency, either by the insufflation of air or carbon dioxide, or by the cervical instillation of a radioopaque medium. There is considerable controversy as to which should be used, gas or liquid. The logical answer, as suggested by Grant,[11] would seem to be the use of gas first, followed by the use of some opaque medium if there is not an easy flow of gas at low pressure through the tubes. The use of non-oily solutions diluted with gum acacia has removed the fear of oil embolism, although Siegler[17] in his monograph, *Fertility in Women,* prefers iodized oil in view of the rapid passage and spill of the water soluble solutions, resulting in overshadowing of the tubal outlines.

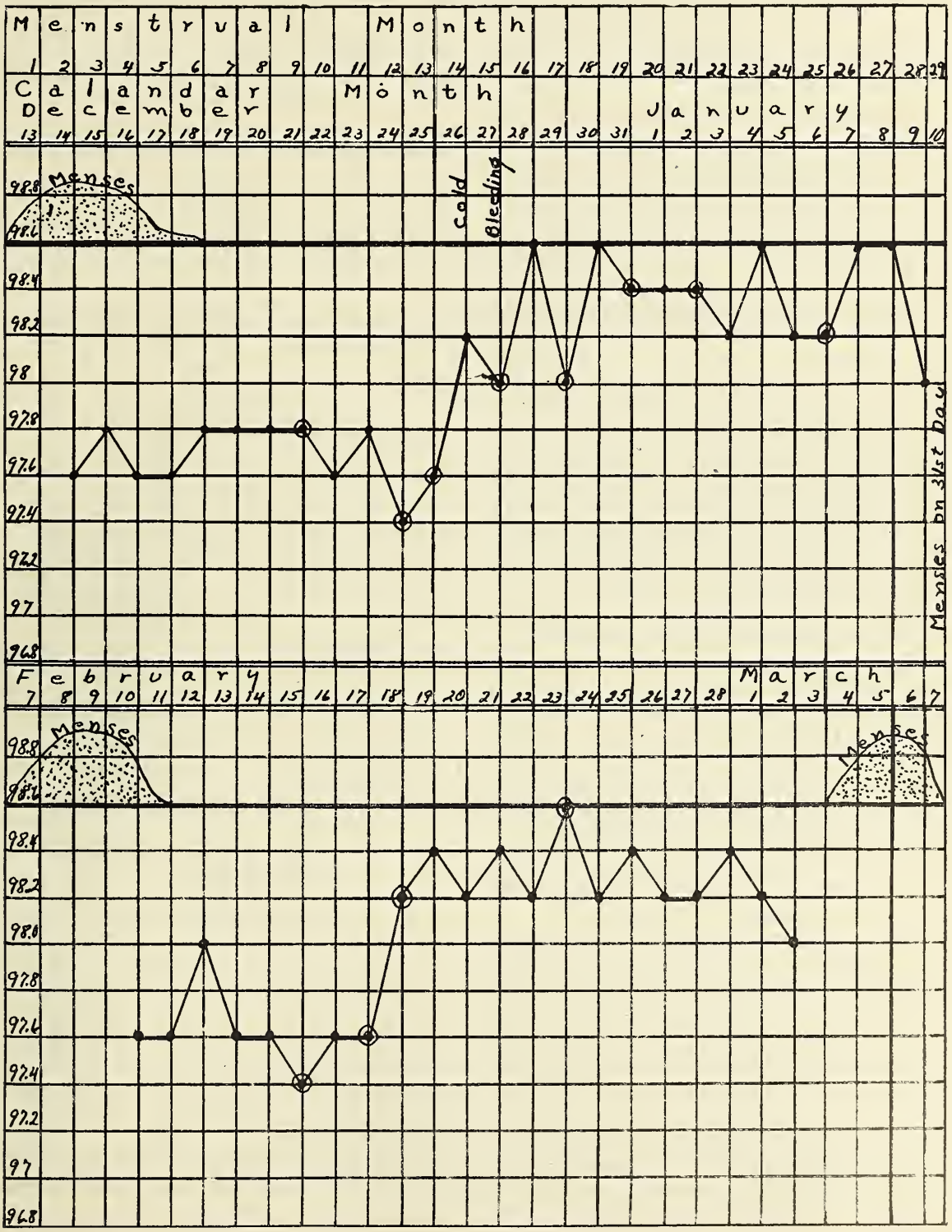
The danger of either type of examination is very small if the following contra-indications, as set forth by Siegler, are observed:

1. Acute, subacute or recent pelvic inflammatory disease.
2. Chronic, purulent cervical discharge with endocervicitis.
3. Infected urethral or Bartholin glands.
4. Menstruation or abnormal bleeding.
5. Following dilation and curettage.
6. Cardiovascular and pulmonary disease.

7. Severe nervous disorders, such as epilepsy and mental defectiveness.
8. Pregnancy.

Tubal insufflation can be done by the general practitioner in his office and requires no anaesthesia or special instrument other than a uterine cannula, tenaculum, and a sphygnomanometer. For more detailed study of tubal patency with air a kymograph can be used, and yields additional information such as the presence of utero-tubal spasm, permeable

FIGURE 1



strictures, and the determination of the degrees of ovarian activity.

ENDOMETRIAL BIOPSY

It is well known that uterine bleeding can occur in the absence of ovulation, and the endometrial biopsy is an office procedure which yields valuable information as to the presence or absence of ovulation. This should be the next step in the investigation, particularly if the basal temperature graphs have not shown typical ovulatory curves, or if menstrual periods are irregular.

The biopsy should be done just before, or within a few hours after, the onset of menstruation. Some, Gardner[9] and Hamblen,[3] for instance, prefer the latter as at this time there is little danger of interrupting a pregnancy. No anaesthesia is usually required, and the specimen is obtained with a small biopsy curette, or with a small suction curette, from the anterior and posterior walls of the fundus. Siegler[17] reports that in 2000 biopsies taken within a week of menstruation six per cent of cases with cyclic bleeding showed persistent anovulatory bleedings, while two per cent showed only occasional episodes of anovulatory bleeding. He says, "Bleedings were considered anovulatory if *repeated* biopsies showed either hypoplastic or proliferative architecture of the endometrium." As a rule, in cases of cyclic bleeding, the finding of normal secretory or progestinal phase endometrium indicates ovulation has occurred. However, a secretory endometrium can also be produced by a corpus luteum without the liberation of an ovum.

THE PSYCHOSOMATIC FACTOR IN STERILITY

It has been found that when a series of cases has been investigated as has been outlined, there are still couples which, although apparently normal, remain childless. It has been observed that if such a couple adopts a child, the wife frequently becomes pregnant within a short time. This, and other observations, have led Kammon[8] and others to state that in many cases there is a strong psychosomatic factor in sterility. Therefore, in some instances, a thorough psychiatric study of the sterile couple is indicated.

TREATMENT OF STERILITY

Time permits only the mention of a few items of interest in the treatment of sterility. Oddly enough, the investigation itself frequently results in pregnancy as certain obvious causes are corrected. Tubal insufflation or the instillation of oil may unblock the fallopian tubes and be followed by pregnancy, and often these procedures are done with this end in view.

A recent addition to the treatment of sterility is the availability of a commercial preparation (Nutri-Sal, Ortho Pharmaceutical Corporation) which, when dissolved in water, makes a glucose-Ringers solution. This solution, used as a precoital douche, has been found to prolong and increase the activity of spermatozoa in the vagina.

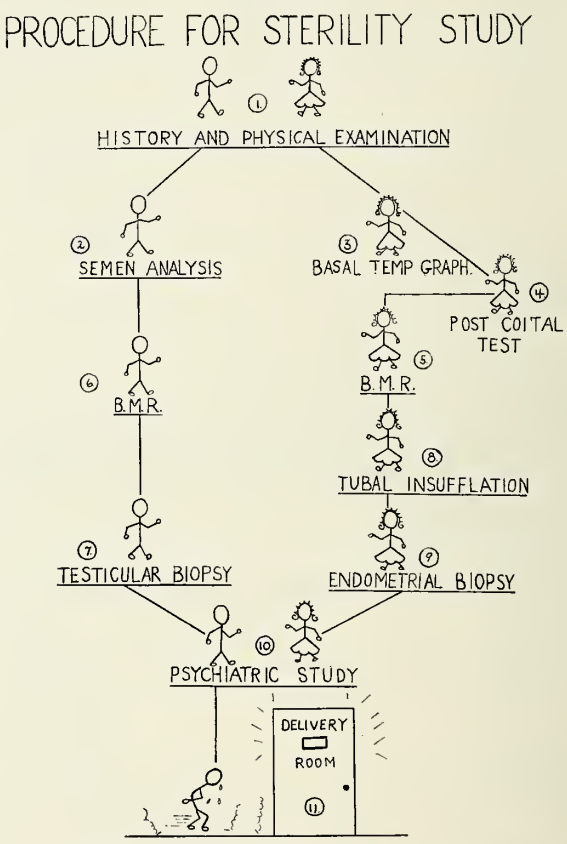
For the treatment of low sperm count, many authors[16, 10] recommend the use of Serum Gonadotrophin as the hormone therapy most likely to be of value. I have one case in which a persistent count of 30,000,000 was apparently raised to 115,000,000 by such therapy. Adams[10] states that such therapy is still experimental and should be used with caution. Vitamin E and thyroid are almost routine in the treatment of sterility.

Australian writers stress the value of a holiday and rest and relaxation; and certainly, in this day and age of speed and tension, these things are important.

SUMMARY

In summary, a schematic representation of a plan for the investigation of sterility is shown (Figure 2).

FIGURE 2



1. This plan of investigation for the diagnosis of the causes of sterility has been set forth, and it has been stressed that, in most instances, numerous factors are in operation contributing to the low fertility of the couple.

2. The importance of the factor of male infertility in the cause of childlessness has been stressed.

3. It has been emphasized that in most cases the

term, "subfertility" more aptly applies than does the term, "sterility."

4. A few items of interest in the treatment of sterility have been mentioned.

CONCLUSION

It is felt that too often the busy physician, when confronted with a case of sterility, does not apply himself to it with the same interest and zeal with which he would apply himself to the diagnosis of some obscure illness. If, then, this paper will have stimulated some increased interest in this problem, its main object will have been fulfilled.

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INDUCTION OF LABOR — USING THE VOORHEES BAG

Robert L. Newman, M.D.*

Kansas City, Kansas

The proper evaluation of the use of the Voorhees bag in obstetrics has been a matter of interest to me for the past several years. Many practicing obstetricians have made the statement that the use of the bag is completely outmoded, obsolete and some other procedure should be utilized in those cases in which a bag is contemplated. However, at the University of Kansas hospital, it has been the practice to use the bag in carefully selected cases where it is felt to be the best procedure for the patient under the existing circumstances attending her pregnancy.

An early form of the bag was devised by Braun in 1851, and Champetier de Ribes described his in 1888. Voorhees modified the de Ribes bag in 1897 and published in 1913 his experiences in 634 inductions at Sloan Hospital for Women. Since that time, there seems to have been a general recession in the use of the bag. Waters, in 1938, published his results of the use of the Voorhees bag in 372 cases, occurring in 25,969 deliveries at Margaret Hague Maternity Hospital. He concluded that bag induction of labor was a valuable adjunct to manipulative obstetric practice, with clear cut indications which could not be refuted.

In an effort to evaluate our own experiences with the bag a study of the cases in which the bag was used in this hospital from 1929 until 1947 was made.

There was a total of 92 cases in which the bag was used for the purpose of inducing labor. During that period of time, there were 8000 hospital deliveries and approximately 5000 deliveries on the outside service. It is interesting that the incidence of bag induction in this series and that of Waters is the same—1.4 per cent. Two cases in which the bag was inserted with the patient already 8 cm. dilated were eliminated from the series, since they could not properly be classed as induction of labor. The use of the bag for induction of abortion or miscarriage, about 20 cases, was also eliminated from the series. In these 92 cases, 32 were primipara and 60 multipara. This is a commentary in itself, since by far the large majority of the 8000 hospital deliveries were primipara. Most of the multipara were delivered in the home until the discontinuance of the outside service in 1944. Thus, the bag is used much less frequently in primipara than multipara, some other procedure being selected as most applicable. This difference is even more pronounced in Waters' series—only 84 of 372 cases being primipara.

The indications for the use of the bag are principally toxemia and placenta praevia, as seen in the accompanying table. In many cases of placenta praevia, the bag was used primarily for the control of bleeding, and was successful in every case. The use of the bag in four cases where the membranes were previously ruptured indicates at least four cases in which rupture of the membranes failed to bring about labor. In Waters' series, there were 13 similar cases of ruptured membranes, 138 cases where toxemia or placenta praevia was the indication.

In this series, the uterus failed to respond with contractions in 19 cases. In 11 of these cases, the

*University of Kansas Medical Center.

INDICATION FOR INDUCTION

TOXEMIA	PLACENTA PREVIA OR SUSPECTED PLACENTA PREVIA	RUPTURED MEMBRANES	PREMATURE SEPARATION OF PLACENTA	TRANSVERSE PRESENTATION	MISCELLANEOUS
52	24	4	3	3	6

bag was used a second time, and succeeded in four cases, but failed again to obtain a uterine response in seven cases. Two of these remaining cases had the bag used for the third time with still no uterine response. However, failure of the bag to produce uterine contractions did not necessarily mean failure of the cervix to dilate. All of these cases were delivered vaginally except one. That one patient in the series who was undelivered was sent into the hospital with a suspected placenta praevia. A bag was introduced and expelled with no uterine contractions. The patient left the hospital the following day undelivered, the reason for departure not explained by the record. A definite impression obtained from the study of these cases is that the patient with a firm, long, tightly closed cervix is much less likely to respond to the bag. The number of cases is too small to make a positive statement.

38 CASES
OTHER THAN SPONTANEOUS CEPHALIC DELIVERY
13 CASES—VERSION AND BREECH EXTRACTION
8 CASES = SOME OTHER REASON THAN BAG
5 CASES = DUE TO BAG
14 CASES—BREECH DELIVERIES
12 CASES = BREECH BEFORE BAG
2 CASES = BREECH AFTER BAG
11 CASES—FORCEPS DELIVERIES

Thirty-eight of these 92 cases were delivered in some way than by a spontaneous cephalic delivery, shown in the accompanying table, as compared with 180 cases of operative interference in Waters' series.

Eleven of these were forceps deliveries, only one of which could be said to be due to the bag—forceps being applied because of a prolapsed hand. Five of the versions and two of the breech extractions could be said to be due to the bag, making a total of eight operative cases as a result of the bag.

The accompanying table demonstrates the fetal mortality in the series. There were 25 fetal deaths, including one set of twins. Fourteen of these deaths occurred in cases of placenta praevia and 11 in cases of toxemia. There were four ante-partum deaths, nine intrapartum deaths, and 12 postpartum deaths. One of the intrapartum deaths was a result of the head being caught in the cervix during breech extraction. One of the antepartum deaths followed the use of a bag. The bag failed and the patient later delivered spontaneously. Thus, at the most, counting eight intrapartum deaths and one antepartum death, there are nine fetal deaths that could be attributed to the bag.

It is interesting that in all operative cases of placenta praevia there was a 100 per cent fetal mortality while death of the baby occurred in only six of 17 cases of placenta praevia that delivered spontaneously. The fetal mortality was not quite so high in toxemia cases, death of the baby occurring in six of 10 operative deliveries and only five of 42 spontaneous deliveries. Thus, there was death of the baby

FETAL MORTALITY

INDICATION & DELIVERY	WT. BABY	TIME OF DEATH	CAUSE OF DEATH
PLACENTA PREVIA SPONTANEOUS	3090 GMS	INTRAPARTUM AFTER BAG	BLEEDING
	2530 "	36 HRS P.P.	PREMATURITY
	2505 "	32 HRS P.P.	"
	3679 "	INTRAPARTUM AFTER BAG	PREMATURE SEPARATION UTERINE TETANY
	3920 "	ANTEPARTUM	BAGS??
	1975 "	INTRAPARTUM	BLEEDING
PLACENTA PREVIA OPER. DEL.	2225 "	DURING EXTRACTION	CERVIX AROUND HEAD
	2530 "	36 HOURS P.P.	PREMATURITY
	2425 "	FEW HOURS P.P.	"
	1970 "	"	"
	1028 "	INTRAPARTUM	??
	2010 "	INTRAPARTUM AFTER BAG	??
	2100 "	2 HRS P.P.	PREMATURITY
	2250 "	ANTEPARTUM	??
TOXEMIA SPONTANEOUS	1760 "	10 DAY P.P.	PREMATURITY
	1760 "	INTRAPARTUM AFTER BAG	??
	1560 "	5½ HOURS P.P.	??
	800 "	6 DAYS P.P.	PREMATURITY
	2167 "	FEW DAYS P.P.	"
TOXEMIA OPER. DEL.	2055 "	INTRAPARTUM AFTER BAG	PREMATURE SEPARATION
	1540 "	FEW HOURS P.P.	PREMATURITY
	1100 "	2 HOURS P.P.	SYPHILLIS PREMATURITY
	1877 "	INTRAPARTUM AFTER BAG	??
	1360 "	ANTEPARTUM	??
	1220 "	"	??

in 14 of 24 operative cases exclusive of breech deliveries. Obviously, then, a bag should not be used where operative delivery is contemplated; and operative delivery should not be resorted to after use of a bag, if avoidable.

Of the six fetal deaths in babies weighing over 2500 grams, only three could be said to be due to the bag; in seven dead babies between 1500 and 2000 grams, three deaths could be said to be due to the bag; and in five deaths under 1500 grams, one could be said to be due to the bag. In Waters' series, there were 121 fetal deaths in 372 cases.

MATERNAL MORBIDITY 100.4 AFTER 1ST P.P. DAY FOR 2 DAYS

GRAVA	INDICATION	RESPONSE TO BAG	TYPE OF DELIVERY	PACK-UTERINE	MATERNAL MORBIDITY
1/0	TOXEMIA	GOOD	LOW FORCEPS OLA	NO	ACUTE RHINITIS
1/0	"	"	SPONT ODP	2X	ENDOMETRITIS, ACUTE
4/2	TRANSVERSE PRES.	"	BREECH EXT	NO	ACUTE PYELITIS
1/0	BLEEDING PLACENTA PRE-TOXEMIA	"	PERS. SPONT. OLP	NO	DISPLACED UTERUS
4/2	TOX. BLEEDING PLACENTA PREVIA	"	VERSION & BREECH EXT.	YES	ACUTE PYELITIS
3/2	HYPERTHYROIDISM	" (2 BAGS)	VERSION & BREECH EXT.	NO	HYPERTHYROIDISM
1/0	TOXEMIA	"	SPONT. ODA	NO	?
1/0	PYELONEPHRITIS	"	SPONT. OA	"	PYELONEPHRITIS
3/2	BLEEDING PLACENTA PREVIA	"	BREEGH EXT	YES	ACUTE ENDOMETRITIS
1/0	TOXEMIA	"	SPONT. OLA	NO	ACUTE RHEUMATOID ARTHRITIS
11/10	BLEEDING PLACENTA PREVIA	"	SPONT. ODP	YES	ACUTE ENDOMETRITIS
4/3	BLEEDING	NO CONTRACTIONS	BREECH EXT	NO	PYELITIS, PLACENTITIS
1/0	NEPH. TOYEMIA	" (2 BAGS)	VERSION & BREECH EXT	"	PYELITIS
1/0	ECLAMPSIA	" (3 BAGS)	"	"	CELLULITIS OF FACE
5/3	PLACENTA PREVIA	GOOD	"	YES	ACUTE ENDOMETRITIS
1/0	TOXEMIA	NO CONTRACTIONS (3 BAGS)	"	NO	CERVICAL LAC ?

Maternal morbidity is shown in the accompanying table. There were 20 morbid cases in the series, using as a definition of morbidity, any case with a temperature of 100.4 degrees for two succeeding days following the first postpartum day. This compares with Waters' report of 46 morbid cases in 372. It was interesting to discover that of the four cases in the present series that had a definite endometritis, all of them had had an intrauterine pack. This would indicate the marked danger from intrauterine packs or, perhaps, multiple operative procedures. There was only one case in the series that had an intrauterine pack that did not develop an endometritis.

There were nine maternal deaths in Waters' series. Of the six deaths in this series, there is none that can be said to be directly due to the use of the bag. There were two cases that died three months postpartum and certainly cannot be said to be due to the bag. Whether Caesarean section would have changed the outcome in two cases that died of hemorrhage is difficult to say. There are some who would argue in favor of the section. There were two deaths due to eclampsia and one of the cases was certainly mismanaged, in that the bag was used before the convulsions were controlled. It is interesting that in all six of these cases there was a good response to the bag.

It is difficult to evaluate a series of this kind, since it deals primarily with pathology and in this particular series, the number is too small for any consideration of percentages.

It would seem that there is a very definite place for the use of the Voorhees bag in obstetrics. However, the bag should be used only in the presence of proper indications with full knowledge of the dangers and difficulties involved.

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The American Association for the Study of Goiter offers the Van Meter prize award of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The names of winners will be announced at the annual meeting of the Association in Toronto, Canada, May 6-8, 1948.

Essays may cover either clinical or research investigations and should not exceed 3,000 words in length. A typewritten double spaced copy should be sent to the corresponding secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Georgia, not later than February 1, 1948. Manuscripts will be judged by a committee to be appointed.

TRAUMATIC DIAPHRAGMATIC HERNIA

Larry E. Vin Zant, M.D., and James S. Hibbard, M.D.

Wichita, Kansas

Many cases of herniation through a lacerated diaphragm have been reported; however, little has been written concerning the importance of early repair before complications develop. In many cases the diagnosis is not made until months after the injury. The symptoms may be thoracic or abdominal or a combination of the two and are not characteristic. A hernia should always be looked for in crushing injuries to the abdomen and perforating injuries of the lower thorax and upper abdomen. Complete x-ray studies should be made in these cases to determine the presence of a herniation through the diaphragm.

CASE REPORT

A male, 19 years of age, entered the St. Joseph hospital, Wichita, Kansas, assigned to our service February 3, 1947, because of nausea, vomiting and pain in the epigastric region of seven days duration. At the age of 12 he was struck by a car and a door handle was embedded in his back. Four months later, shortly after wrestling, he complained of pain in the epigastric region, with vomiting. An appendectomy was performed. A year later the same symptoms returned and he was operated upon for bowel obstruction, but the site of the obstruction was not found. Transnasal duodenal suction and enterostomy completely relieved his obstruction. At the age of 17 he was hit in the right upper quadrant while playing football and developed nausea and frequent vomiting which was relieved by conservative therapy. X-ray studies at this time revealed a diaphragmatic hernia which undoubtedly was the cause of his previous disability.

On January 27, 1947, he complained of pain in the epigastric region with vomiting, shortly after wrestling at school. Seven days later he was transferred by ambulance to the St. Joseph hospital, Wichita, Kansas. He complained of vomiting and pain in the epigastrium upon arrival. He was not distended. The left lower chest was dull and breath sounds were absent. Pulse rate was 130, temperature 101. X-ray examination showed a density of the right lower chest with a marked shift of the mediastinum to the right. The nasal tube was easily inserted into the stomach, but it was impossible to decompress the large mass seen by x-ray which was thought to be intra-thoracic abdominal viscera. He was prepared for operation by continuous suction and intravenous glucose and saline. The next morning he was operated upon. An abdominal approach was used because of the possibility of gangrenous intestine. It was necessary to open the thorax in order to reduce the herniated stomach, transverse colon and omentum. The greater curvature of the stomach was sealed off by the hernial opening and contained 8½ pints of dark fluid. The serosa was dark, rough and velvety. The colon and omentum were also strangulated. The opening in the diaphragm to the left of the oesophageal hiatus measured four cms. There was no fluid nor greatly distended intestines in the abdominal cavity. The thoracic cavity contained about 500 ccs. of dark fluid. The opening in the diaphragm was enlarged and the contents of the stomach removed by a nasal suction tube. The color returned to normal and the repair of the diaphragm was performed with interrupted silk sutures. The next day the patient was up and he left the hospital on the seventh post-operative day.

DISCUSSION

Traumatic diaphragmatic hernia may be caused by direct or indirect trauma. The hernia may occur at any point, although the most common region in indirect injury is the dome of the posterior half of the left side of the diaphragm. The stomach, colon, small bowel and spleen are frequently involved in the hernia and symptoms are produced in the thorax and by interference with function of involved abdominal organs. The diagnosis is made roentgenologically by finding stomach or bowel in the thoracic cavity.

Shock is frequently present at the time of the injury. We believe these patients should be operated upon as soon as the acute symptoms caused by the injury have subsided and the patient's condition permits.

Hedblom[1] gives figures to indicate, as one would expect, that hernia through a small opening in the diaphragm, exclusive of oesophageal hiatus stomach herniations, are most prone to strangulation and therefore constitute as such, an even greater indication for immediate repair. Harrington[2] found in a series of 378 cases studied, the mortality in the presence of obstruction was 60 per cent. The mortality if operated upon before obstruction should be no higher than for other major surgical operations of the same magnitude.

CONCLUSIONS

(1) The laceration in the diaphragm due to di-

rect trauma is usually small and stomach or colon herniations are most prone to strangulation.

(2) The high mortality of traumatic diaphragmatic hernia is due to the occurence of complicating intestinal obstruction and strangulation.

(3) Operative treatment should be employed early and not as a last resort.

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CARCINOMA OF THE BLADDER

Hematuria is the initial symptom in about 75 per cent of papillary tumors. It is usually painless and intermittent.

Frequency of urination and dysuria are often present when the growth is near the vesical neck or when infection is superimposed.

For early diagnosis cystoscopy is essential. Cystography is of value in demonstrating the extent and invasiveness of the growth.

The treatment indicated varies from simple cystoscopic electrocoagulation for the so-called benign papillomata to total cystectomy with transplantation of the ureters to the bowel or skin for growths showing marked invasion of the bladder wall. Local excision of isolated growths not involving the trigone may be succesfully done. Electrocoagulation, either transurethrally or by the suprapubic approach, may be combined with the implantation of radon seeds. Occasionally, deep x-ray therapy may be the treatment of choice.

Prepared by Committee on Control of Cancer

PRESIDENT'S PAGE

Thanks a Million

To the Members of the Kansas Medical Society:

If we compared our whole structure to a building with foundation and cornerstone, we should find inscribed on that cornerstone

KANSAS MEDICAL SOCIETY
Devoted to Advancement
in
Science, Art and Distribution
of
Medical Service

The stones of our foundation are the many committees contributing time and energy toward the fulfillment of those objectives. It would surely surprise the casual member of the Kansas Medical Society to know the volume of constructive effort produced by these keystones of our structure.

To mention a few, the Editorial Board of the Journal, the Board of Directors of Kansas Physicians' Service, the Committee on Veterans Affairs, those on Rural Health, Anesthesiology (with its subcommittee on Plasma), Cancer, Study of Heart Disease, Medical School (with a subcommittee on Postgraduate Work), Medical Economics, Industrial Medicine, Maternal and Child Welfare, Allied Groups, Hospital Survey, etc.

All of these committees have had meetings, and the reading of the minutes of their gatherings gives one a thrill of pride because our men are truly unselfish with their ideas and their time. If all this material were to be printed and bound, a sizable volume would result. In the center of this work, arranging meetings, keeping minutes, helping to carry to fruition the plans which are perfected, stands our most efficient executive secretary. He and his staff perform with efficiency at all times.

We thus prove able to work together as a scientific group, and science should be made a continuing, ever changing method applicable to all phases of human life. Many thanks to our committees, our council and our fine executive staff.

L. S. Nelson
President.

EDITORIALS

Hospital Construction in Kansas

Hospital construction is contemplated in many Kansas communities. The promise of federal aid has spurred this program until today more than 60 individual hospital projects requesting federal aid are on file with the State Board of Health. At least 14 others are in the process of making application, and how many more will be added during the next five years is unknown.

The total requested in federal aid is already several times the amount Kansas will receive. For many reasons, although this is sufficient, it becomes a certainty that many groups working toward construction of new hospitals or improving existing facilities, under the impression that federal aid is available, will be disappointed. Clarification on many points with relation to this program was given at a meeting of the Hospital Survey Committee and at the first public hearing of the Hospital Advisory Council, both held in Topeka recently.

The federal hospital construction act is the framework of the program, but details are left to an advisory council on a federal level. In Kansas the State Board of Health shall administer the funds with the advice of a council created by act of the Kansas legislature. The chairman of this council is Dr. John L. Grove of Newton. The Kansas council will supervise all local applications and will attempt to determine the priority that shall be given the various applications. There are, however, many considerations governing this program over which the advisory council has no authority. These should be kept in mind by any group contemplating an application for federal aid.

For instance, it has been ruled that a hospital will receive either one-third the total building cost or nothing. That regulation came from the federal level and cannot be altered locally. So did the basic formulas on which the council is obligated to determine the bed needs for local areas, and the overall requirement that the state be divided into three distinct hospital areas.

The first is called a base area. This area must have a population of 100,000 or more and contain a hospital fully approved for the training of interns and residents and conducting a training school for nurses. Under this definition Kansas has two base areas, one at Kansas City, the other at Wichita.

The second is an intermediate area which is federally defined as comprising a population of 25,000 or more with a hospital of 100 beds or containing a hospital that might be developed to 100-bed capacity. The third and all the remaining portion of the state will be designated rural areas.

The importance of this becomes apparent with the arbitrary formula that a base area may be developed to a maximum of four and one-half beds per thousand population, an intermediate area up to four beds per thousand population, and rural areas up to two and one-half beds per thousand. Whatever else may seem logical, the Kansas Hospital Advisory Council cannot allow federal aid in areas having more hospital beds than specified above.

Also determined on a federal level are three formulas, any or all of which might be used in computing the bed needs of any area. The first is the ratio of population and existing hospital beds. It has been determined by the local council that such a formula will benefit larger communities but will act unfairly to rural areas with small population. The second is a formula based on birth and death statistics in hospitals. It has been determined that the average hospital birth and the average hospital death occupy a bed for a certain number of days. According to this formula, information is obtained as to the comparative use of hospitals made by the communities. The local council feels that this formula also reacts to the disadvantage of sparsely settled areas where many home deliveries are made and also to communities with a high age complement. The third is a highly complicated mathematical procedure developed by the Commission on Hospital Care. This averages the daily hospital census with other somewhat intangible factors. In Kansas all three methods have been used and the three methods have been averaged in an attempt to obtain as accurate a picture as possible.

From this point the Kansas hospital program is largely in the hands of the Hospital Advisory Council and the State Board of Health. The Board of Health, long ago, surveyed all hospitals in the state. A considerable staff under Dr. R. M. Heilman and Dr. F. C. Beelman has been working a long while to clarify the Kansas picture. After the federal requirements have been acceded to, the state will grant priority only after many other considerations are made. For instance, distance to the nearest hospital is important. So is the availability of a hospital. The question of proposed community development is also important as, for example, industrial development in an area might radically change the hospital picture. Conditions falling under the category of "acts of God" are also to be considered. For instance, if fire destroyed a hospital in a rural area, it would alter the picture for the entire section of the state. Local needs are also to be studied on the basis of finance, using such figures as the average income per family within a community as an index of a community's ability to take care of its

own needs. The average relief load of an area and such practical considerations as whether plans are completed for hospital operation are also studied, in addition to the availability of adequate medical care, nurses, etc.

In general, then, the problem is enormous. During five years Kansas will receive $4,667,250 from the federal government. Fifteen per cent of this total has been allocated for special services such as tuberculosis, psychiatric and health units. The remaining 85 per cent, $3,967,163, will go for general hospital construction. The council recognizes the seriousness of its task and begs to state that its plans are entirely flexible, bounded only by regulations of the federal government and the law as it exists in Kansas. The council will welcome information from all communities at any time and assures each a careful and fair hearing. It has pledged to the medical profession and to the people of this state the best possible plan that can be worked out.

Virtue of Liniments

Most people have confidence in liniments. There is something mysterious about them. Heaven help the pharmacist whose refills do not measure up to the patient's memory of the color, consistency and smell by which he identifies its conformity to the first dispensation that did so much good.

A liniment is a pharmacopeial preparation, consisting of a medicament in oil, alcohol or water applied by friction to the skin. If the volatile ingredients lack this pristine splendor that characterized the contents of the original container, confidence is lost forthwith, and this usually through absence of olfactory appeal held to be synonymous with unadulterated potency and therapeutic value. The physician who prescribes an odorless rubefaceant may be scientifically right but he could well afford to enhance the value of the preparation by resorting to the art of psychological appeal. We submit that ammonia, camphor, turpentine or wintergreen applied locally may have some beneficial effects. We agree that in cases where time and *vis medicatrix naturae* are the only requirements both patient and friends are happier if they are given "something to do." We still believe, however, that the chief virtue of liniment is the accompanying massage that would not be carried out if the application were colorless, odorless mineral oil. Faith and hope would not abide in the patient even though the prescription were purest charity.—A.E.H. in Journal Lancet, August, 1947.

Maternal Welfare in Kansas

Kansas has an enviable record among all states with regard to maternal deaths. Your Committee on Maternal Welfare, of the opinion that this excellent record can still be improved, is preparing a program designed to further reduce maternal mortality. Before long you will hear more of their objective, which might be stated somewhat as follows: "to find the women marked to die this year and to save as many as possible."

The last part of the program is being considered from various angles. Increased activity will be noticed within the medical profession, calling your attention to the complications of pregnancy. The public also will be invited to assist in this campaign. There may be organized, during this year, a series of mothers' classes over the state under the direction of the local medical society and conducted by a competent, well trained staff. All adult women will be invited to attend these courses through which they will obtain a better appreciation for careful medical attention during the term of pregnancy.

The first part of the objective has already been started. At a recent meeting of the committee, the death certificates of all maternal deaths occurring during the first eight months of 1947 were reviewed. The statistics resulting from this study have been analyzed by Dr. Robert E. Pfuetze, a member of the committee, and are reported below.

For the 29,250 births reported during the first eight months of the year, there were 30 maternal deaths, a ratio of one to one thousand. This compares favorably with the rate of 1.47 per thousand in 1946.

Hemorrhage and shock accounted for the greatest number of deaths, being listed as the principal cause in 12 cases and as a contributing factor in another. Of the 12 mentioned, three were ectopic pregnancies, one was a ruptured uterus and two were abortions.

Other deaths listed included eight from toxemia of pregnancy and nephritis, three from heart disease which apparently became worse during pregnancy, one from pulmonary embolism, one from the anesthetic, and one from infection after an attempted abortion. Infection contributed to the death of another. The marked decline of infection as a cause of death is notable.

Four deaths appeared to be coincidental with pregnancy.

Statements Under Railroad Retirement Act

Physicians throughout the nation are being asked to furnish medical evidence to substantiate the claims of railroad workers who may now draw cash sickness benefits under the Railroad Unemployment Insurance Act. The railroad retirement board points out that applications must be mailed not later than the seventh day after the first day of sickness to reach their destination within the legal time limit and to avoid loss of benefits for rail employees. Doctors may send completed statement of sickness to the patient or to the office of the board to which it is addressed.

REFRESHER COURSE IN PHYSICAL MEDICINE

DECEMBER 1, 2 & 3, 1947

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HAROLD DINKEN, M.D., Assistont Professor of Physicol Medicine, University of Colorodo School of Medicine, Denver.

EARL G. ELKINS, M.D., Section on Physicol Medicine, Moyo Clinic, Rochester, Minn.

H. WORLEY KENDELL, M.D., Professor Physical Medicine, University of Illinois, Chicogo.

MRS. ALICE CLARK, O.T.R., Occupotionol Theropist, Cerebrol Polsy Nursery School, Konsos City, Mo.

MISS ELIZABETH DENTON, R.P.T., Physicol Theropist, Cerebrol Palsy Nursery School.

MISS MILDRED HATFIELD, B.S., Speech Theropist.

MISS RUTH KENNETT, R.P.T., Physical Theropist.

University of Konsas Foculty:

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WM. H. GOODSON, JR., M.D., Associote in Medicine.

KENNETH E. JOCHIM, Ph.D., Professor of Physiology.

HERBERT G. MILLER, M.D., Professor of Pediotrics.

RUTH G. MONTEITH, R.P.T., Technicol Director, School of Physicol Theropy.

DON CARLOS PEETE, M.D., Associote Professor of Medicine.

NICHOLAS S. PICKARD, M.D., Instructor in Surgery.

DONALD L. ROSE, M.D., Assistont Professor of Physicol Medicine ond Heod of Deportment.

PAUL W. SCHAFER, M.D., Assistont Professor of Surgery.

JAMES B. WEAVER, M.D., Professor of Clinicol Orthopedic Surgery.

SUBJECTS TO BE PRESENTED

Physicol Medicine in the Treotment of Arthritis—Medicol Aspects: Orthopedic Aspects

The Present Status of Artificial Fever Theropy.

The Application of the Principles of Instrumentation to Physicol Medicine.

The Clinicol Applicotion ond Significonce of Electro-Myography.

The Joint Application of Occupotionol Therapy ond Physical Theropy in Physicol Medicine.

The Importance of Simple Muscle Testing Procedures in o Generol Medicol Exominotion.

Physicol Medicine in the Treotment of Vosculor Diseoses.

Physicol Medicine ond the Hemiplegic.

The Rotionol of Treotment of Poliomyelitis.

Physicol Medicine in Disobilities of the Aged.

The Teoching of Crutch Wolking: DEMONSTRATION.

The Role of Physicol Medicine in the Treotment of Thorocic Diseoses.

The Physiologic Basis for Theropeutic Exercise.

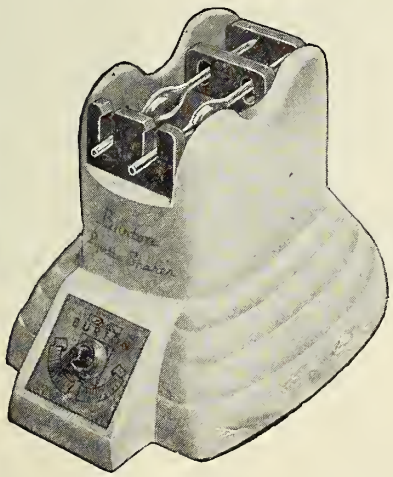
The Use of Physicol Procedures in Orthopedic Disobilities.

Rehobilitotion in Orthopedic Conditions.

The Applicotion of Physicol Theropy, Occupotionol Theropy ond Rehobilitotion Procedures in Generol Practice.

The Treotment of Cerebrol Polsy—Medicol Aspects. Physicol Aspects.

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EXECUTIVE OFFICE

Material for this column is taken from articles coming to the attention of the Executive Office. They may concern controversial issues and will not necessarily reflect the editorial opinion of the Journal. Articles republished or summarized here are presented because it is believed they will be of interest to the medical profession in Kansas.

Is Medical Care Expensive?

The A.M.A. recently issued a pamphlet entitled "Is Medical Care Expensive?" This study was made by Frank G. Dickinson, Ph.D., director of the Bureau of Medical Economic Research of the American Medical Association. Copies of the reprint are available upon request and should be interesting to anyone concerned with the problem. After presenting numerous graphs and considerable analysis, Dr. Dickinson admits that estimates of this kind are difficult to make and are probably inaccurate in many respects, but he believes the general conclusions to be apt.

And his conclusions are that medical care is expensive. As the quality of medical care rises, so does its cost. He compares the 1929 standards with those of 1946 to the 1929 automobile and its 1946 counterpart. In medical care these improvements result in the increasing length of life. The patient gets more for his money, he recovers from illness and injury, he returns to work again, he lives longer.

Dr. Harrison H. Shoulders made an observation that is quoted in this pamphlet. "When appendicitis was treated largely by the administration of opium pills and the application of poultices to the abdomen, the cost of administering such treatment was low but the resulting mortality was high. When the physician acquired an understanding of the disease and perfected a technic for its proper treatment, the mortality from the disease went down to a low level but the cost of treatment went up. When diabetes was treated largely by diet and the administration of codeine, the cost of such treatment was low but the mortality was high. The diabetic patient lingered in discomfort for a relatively short while. But when the members of the profession acquired an understanding of the disease and developed a specific method for its treatment and management, diabetic patients were given an almost normal life expectancy in comfort and usefulness. Thus the problems in medical economics have been brought to the forefront."

In this study the comparative cost of medical care with the cost of other items has been noted, and such observations as the following may be found, using the period between 1935 and 1939 as the base period. The cost of medical care in 1945 (since figures are not available for 1946) was 163 per cent that of the base period. However, the amount spent for alcoholic beverages in 1946 was 277 per cent the amount spent during the base period. Jewelry was 408 per cent the amount spent during the base period.

The cost of medical care has risen, but it has increased more slowly in every single year than any other item studied. An interesting subdivision on this series of figures has to do with the total annual personal income for the years 1940 to 1946. Here again the years 1935 to 1939 are taken as the average. Certain adjustments have been made to correct these figures with reference to persons in the armed forces, etc., so they will be comparable to figures used in other categories. When finally adjusted, the average personal income is set at 100 per cent for any one year. Various items are then studied for the percentage of the total income spent for those services or commodities. It is shown here that even though the cost of medical care has risen, the per cent that is spent on medical care has actually decreased. During the base period 1.2 per cent of total income was spent for physicians' services. In 1945 it stood at .9 per cent. Expenditure for tobacco is the only series other than medical care in this group of six which consumed a lower percentage of adjusted personal income in 1946 than during the earlier years of this seven-year period. Alcoholic beverages and jewelry have risen most dramatically. Recreation and personal care have risen only .1 per cent.

Consideration is also given to expenditures for food and clothing. The per cent of total yearly income spent on food has increased decidedly since 1940. Expenditures for clothing have increased slightly. There is little change for personal care, and a pronounced decline for housing is noticeable. It is interesting to note that the total amount spent during the years 1932-1933 was more than 100 per cent of the personal income. In 1940 it was 93 per cent of the total personal income, and in 1946 had further reduced to less than 85 per cent. This, of course, indicates that salaries and income have risen even faster than have prices for commodities, so that when taken on a per cent basis the cost of medical care for instance has actually declined. It would seem, therefore, that medical care should be regarded as an item which moves with the trend and not against it.

However, when the actual cost of medical care is considered, it is shown that the trend is toward greater expense. The cost of new drugs and many other things continues to make medical care more expensive. Dr. Dickinson states that "students of medical economics should be forewarned that if, as and when a truly great depression strikes the nation again in the 1950's or 1960's they should expect the dollar expenditures for medical care to decline less rapidly than the national income." The physician will be criticized for this condition, but his share of the medical service dollar has declined rather steadily from 31.7 cents in 1929 to 26.9 cents in 1945. The dentist's share has also declined. The hospital's share has increased from 13.3 cents in 1929 to 16.1 cents in 1945. So have the amounts paid for drugs, from 20 cents to 23.1 cents. The difference is still greater in 1946. Part of this is because many physicians were in the service, and certainly a portion of the reason lies in the increased cost of medical care other than physicians' services.

Such a study cannot avoid a discussion of value received. "In a certain sense average lifetime is a measure of social progress. In the heyday of the Roman Empire it was probably close to 25 years; by twentieth century mortality standards, the upper class Romans died off like flies, and an 'old Roman' was a man in his early 30's. In 1700 in Germany it had risen to approximately 33 years. Now it is 67 years! Modern medical care costs money for it costs money to postpone death."

Postgraduate Courses in Dallas

A series of postgraduate courses is now being offered by the Dallas Southern Clinical Society and a four-day conference has been announced for March 15-18, 1948. The December postgraduate course will be on pediatrics, and the meeting of the American Academy of Pediatrics will be held in Dallas during the same month. The dates for the course are December 8-12. Postgraduate work in obstetrics and gynecology will be offered in late January or early February.

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VETERANS ADMINISTRATION AGREEMENT

Negotiations with the Veterans Administration point toward the completion of a new agreement in the near future. When it is completed, physicians of Kansas will find that a majority of past annoyances will have been eliminated. Also as a part of the new agreement will be an entirely new schedule of fees which, it is believed, will more nearly approach the average fee received by physicians in Kansas than is paid according to the present schedule. As soon as this work is completed, detailed information and the new fee schedule will be sent to each physician participating under this plan.

For the present there is a considerable increase in the number of examinations being sent to physicians of Kansas. According to the Medical Coordinator, these have been averaging 90 a day. Familiarity with the forms, as well as experience in the type of information desired by the Veterans Administration, has brought great improvement in the quality of this work during recent months. The Committee on Veterans Administration Affairs returns a much smaller proportion of examinations for correcting than ever before, and of these most are returned for minor alterations.

Perhaps the most common difficulty is that the physician has neglected to sign his name to the examination. Second in order of frequency is the examination where the veteran has failed to list his complaints and sign his name. Below these there are many different conditions that necessitate the examination being returned. Rather frequently the question has to do with diagnosis. The examiner may declare the patient to be normal or may state that no abnormal findings were noted, or he may express his inability to arrive at a diagnosis until further findings can be obtained. He may recommend further study, but the Veterans Administration will not accept the examination until a definite diagnosis has been recorded.

Moreover, the diagnosis must agree with the findings reported in the previous sections of the examination form. By way of example, the examination cannot be accepted if the diagnosis records duodenal ulcer and if the findings under the G. I. portion of the examination are entered as normal. In diagnoses such as that used in the illustration above, and particularly for a heart condition, it is not enough to state that the condition exists; it must be qualified to give the rating board exact information with reference to the existence and nature of the condition. For heart, by way of example again, this must be classified according to the American Heart classifications or as described in the Manual for Medical Examiners, a copy of which is available to any physician at the office of the Kansas Medical Society on request.

A further word of caution has to do with percentage of disability. The physician is not required to determine percentage in case of any disability. This is entirely the responsibility of the rating board. The examination provides this board with all pertinent material relative to the veteran's physical condition. This material is the basis on which disability is determined. Determination of disability represents a complicated procedure, all rather carefully worked out by manuals and statistics. The final disability rating depends not only on the individual's condition but upon his ability to work at present as contrasted with his ability to work prior to service. It also represents his relative ability as he returns to his former kind of occupation. All this the examining physician is not expected to go into. He is requested to present the findings and to give a diagnosis as he sees the condition to be. From his evaluation the rating board determines the percentage of disability.

Again, the quality of examinations provided by the members of the Kansas Medical Society has enormously improved. In proportion to the number that are completed, very few are now being returned for correction. When they are, it is generally because of one of the above reasons. Therefore, if these regulations will be kept in mind, it will further reduce the number of examinations that are considered inadequate for rating purposes.

KANSAS PHYSICIANS' SERVICE

Blue Shield will be increasingly heard during conversations with reference to Kansas Physicians' Service. Actually it is the same thing. Just as the Kansas Hospital Service Association, Inc., has found its trade name, Blue Cross, of inestimable value, so does Kansas Physicians' Service expect the shorter and more easily remembered term to become the name by which the medical care plan will be known. This represents no change in the corporation or in its functions. It is a trade name incorporated and approved under the auspices of the A.M.C.P. and wherever used refers to non-profit medical care plans. In Kansas it is Kansas Physicians' Service.

Blue Shield recently revised benefits to increase the services that may now be paid for under this plan. By action of the Board of Directors it was determined to add the benefits for such a period as experience permits. The member's certificate will not include the new benefits because the venture is still on an experimental basis. It is thought of in the form of a bonus to members by reason of favorable experience that has been noted to this point. Physicians treating patients who are members of Blue Shield should note that the following conditions may be included among services for which the corporation may pay.

Care for nervous and mental disorders, tuberculosis and diabetes, which formerly was eliminated, is now added to the list of services for which the physician may be paid directly from Blue Shield. Added some time ago were payments to cover the cost of minor accidents involving sprains, strains, burns, etc. The benefits with reference to minor accidents are limited to $25. For major accidents amounts listed in the schedule of benefits shall apply.

Urology Award

The American Urological association offers an annual award of $1,000, divided in amounts of $500, $300 and $200, for the three best essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals. This first prize essay will be read at the meeting of the American Urological association at the Hotel Statler, Boston, May 17-20, 1948.

Complete information on the award may be obtained from Thomas D. Moore, M.D., 899 Madison avenue, Memphis, Tennessee. All essays entered in the competition must be in his hands before March 1, 1948.



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BRANCHES AT LOS ANGELES AND DALLAS

COUNTY SOCIETIES

A meeting of the Rice County Medical Society was held September 25 at the Lyons hospital with all members present except one who was on vacation. A paper, "Bowel Obstruction," was presented by Dr. Jack Dysart of Sterling.

* * *

The Marshall county society enjoyed a dinner party with members of the Auxiliary at the river cabin of Dr. and Mrs. J. W. Randell on September 25. Guests were Dr. and Mrs. T. T. Myers of Rochester, Minnesota, former members of the Marshall county groups, and Dr. and Mrs. S. M. Myers of Corning. Dr. T. T. Myers, head of the vascular surgery division of the Mayo clinic, addressed the meeting.

* * *

The Southeast Kansas Medical Society, reorganized last spring, held its first meeting of the fall season at Parsons September 24. Dr. Don Carlos Peete, assistant professor of medicine at the University of Kansas Medical Center, spoke on heart disease and rheumatic fever.

* * *

All members of the Nemaha county society were present at a meeting held September 23 in the office of Dr. M. L. Mollohan. There was a discussion of diphtheria and smallpox inoculation, and the county was divided into three sections for advancing that work with Dr. F. E. Wrightman, Dr. S. M. Myers and Dr. J. H. Gilbert as chairmen. A film on folic acid, loaned by Lederle laboratories, was shown.

* * *

A meeting of the Butler-Greenwood society was held at El Dorado September 8. Dr. Wilfred Cox, Wichita, presented a paper, "Twenty-four Gall Bladder Cases."

* * *

Dr. Richard S. McKee, Leavenworth, was guest speaker at a meeting of the Crawford county society. His subject was "The Relationship of the Anesthetist to the Surgeon."

* * *

The Sedgwick county society held a meeting on October 22 at the Broadview hotel, Wichita. The program consisted of a discussion of 'Malignancies of the K.U.B. Tract, with Special Reference to Diagnosis." Speakers were Doctors L. C. Murphy, H. F. O'Donnell, F. W. Matassarin, G. K. Kawaichi, D. Cramer Reed and W. P. Callahan, Jr.

* * *

A meeting of the Cowley county society was held October 16 in the hospital building of the state training school at Winfield. Dr. C. C. Hawke, in charge of the program, introduced Dr. R. H. Weddle and Dr. H. H. Jones, Sr., who presented clinical cases. Dr. Hawke discussed the Rohrschach ink-blot personality test.

* * *

Dr. Homer Bryant, Coffeyville, spoke on "Diseases of the Eye" at a meeting of the Montgomery county society held October 15 at Hilltop, Coffeyville. A business session and clinical discussion completed the program, attended by 24 members.

* * *

A program on carcinoma of the colon and rectum, prepared by the Committee on Control of Cancer of the Kansas Medical Society, was presented at the October meeting of the Shawnee county society by Doctors J. W. Cavanaugh, Guy Finney, A. A. Fink and Leslie L. Saylor. At the business session 14 Topeka physicians were elected to membership, Dr. Henry H. Luster and Dr. D. Bernard Foster, Menninger Foundation; Dr. J. F. Casey, Dr. Margaret Bullowa, Dr. George Leonard Harrington and Dr. Harry P. Gray, Winter Veterans Administration hospital; Dr. Frederick L. Ford and Dr. Walter S. Wysong, II, Santa Fe hospital; Dr. A. A. Fink, Lattimore Laboratories; Dr. Horace T. Greene, Dr. Shirley E. Clark, Dr. David E. Gray, Dr. Joseph D. Beck and Dr. Charles S. Joss, in private practice.

* * *

A dinner meeting of the Pratt county society was held October 21 at the Park Hills country club, Pratt. The guest speaker, Dr. A. L. Ashmore, Wichita, presented a paper, "Diseases of the Chest" with x-ray illustrations.

The Severity of Leukemia

Leukemia is one of the fatal diseases of the blood, causing more than 6,000 deaths a year in the United States, according to a health talk issued by the educational committee of the Illinois State Medical Society. That number is five times the number of persons killed by infantile paralysis and one and a half times the combined total of measles, scarlet fever, whooping cough and diphtheria. Leukemia is frequently referred to as "cancer of the blood."

Much research is under way on the cause and treatment of leukemia. One new technic, involving injection in the blood of phosphorus which has been made radioactive, has been, in certain cases, helpful in reducing the total white blood cell count and in improving the condition of the bone marrow. In many cases temporary help is given through blood transfusions, x-ray irradiation to the spleen and certain arsenic preparations taken by mouth. Colchicine is used with some benefit in prolonging life.

Among groups sponsoring a program of research through animal experimentation is the National Society for Medical Research, members of which are working in various medical schools and laboratories throughout the country.

New Medical Research Center

A medical research center planned as the greatest in the world will be built soon at Forest Glen, Maryland, just outside Washington, D. C., according to a recent announcement made by Major General Raymond W. Bliss, the Surgeon General. It will be equipped to anticipate and meet medical problems of the future as well as to cope with those of the present. The initial cost is estimated at approximately $40,000,000.

The project will consist of a 1,000-bed hospital, capable of expansion to 1,500 beds; the Army Institute of Pathology building; the Army Medical Museum; central administration building; central laboratory group buildings; the Army Institute of Medicine and Surgery; a library; an animal farm, and quarters for the staff. The center will be closely associated with Walter Reed hospital, the Naval Medical Center, medical schools of the locality, the District of Columbia Medical Society, the National Bureau of Standards, the National Institute of Health and the National Research Council.

U.S.P. Supplement Available

The first supplement to the U.S.P. XIII has been issued by the Committee of Revision of the Pharmacopoeia of the United States and is now being distributed through secretaries of Boards of Pharmacy. Copies of the supplement will also be mailed on request to all owners of the U.S.P. XIII, without charge. Requests should be addressed to the Committee, 4738 Kingsessing Avenue, Philadelphia 43, Pennsylvania.

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MEMBERS

Dr. W. H. Fritzemeier, Wichita, is serving a residency in dematology and syphilology at the University of Michigan.

* * *

Dr. Fred Dietrick, a graduate of the University of Kansas School of Medicine, has announced the opening of an office in Lakin.

* * *

Dr. Mervin T. Sudler, Lawrence, at the request of the University of Kansas, has presented an oil portrait of himself to the School of Medicine. He was professor of surgery at the University from 1905 to 1924 and was dean of the medical school for 13 years.

* * *

Dr. Charles Frey and his wife, Dr. Louise Ireland Frey, who were members of the Sedgwick county society before Dr. Charles Frey entered the service, have established practice at Cedaredge, Colorado.

* * *

Dr. C. Henry Murphy, Wichita, is in charge of medical features of the city health department to direct that division until a successor to the late Dr. J. E. Wolfe is named.

* * *

Lt. James D. Colt, V, who has been serving in the medical corps in Japan, recently returned to this country and is on leave at his home in Manhattan.

* * *

Dr. Fagan N. White, Russell, who became a member of the International College of Surgeons at its meeting in Chicago last month, remained in that city for postgraduate work at the Cook county hospital.

* * *

Dr. Calvin Wartman, Wichita, who has been serving a residency at the Sedgwick county hospital, reported to Fort Sam Houston, Texas, on October 1. After an indoctrination course he will be assigned to a permanent station.

* * *

Dr. V. M. Winkle, former assistant director and epidemiologist with the Topeka-Shawnee Health Department, has joined the staff of the Kansas State Board of Health. He is serving temporarily as director of the Division of Local Health Administration and is devoting part of his time to the Division of Industrial Hygiene.

* * *

Dr. W. F. Bernstorf, Winfield, attended the eighth annual meeting of the Ambulatory Fracture association at Aurora, Illinois, in October and addressed the meeting on fracture problems.

* * *

Dr. William C. Menninger, general secretary of the Menninger Foundation, Topeka, has been named a member of two committees appointed by the National Research Council, the Committee on Veterans' Medical Problems and the Committee on Neuropsychiatry. He was also elected president of the Central Neuropsychiatric association at a meeting held in Galveston, Texas, last month.

* * *

Dr. J. H. Baker, LaCrosse, announces that Dr. James Makison, formerly of Escalon, California, is now associated with him in the operation of the Baker hospital. Dr. Makison is a graduate of Georgetown university in Washington, D. C., and interned at Michael Reese hospital in Chicago.

Dr. J. G. Evans, Kansas City, and Dr. W. J. Kiser, Wichita, were named fellows of the International College of Surgeons at a meeting held October 3.

* * *

Dr. Floyd C. Taggart, Topeka, became a diplomate of the American Board of Anesthesiology at a meeting held October 7.

* * *

Dr. Arthur J. Revell, who has been serving at the veterans hospital at Fort Riley since his discharge from the Army medical corps, announces that he will soon return to Pittsburg, where he practiced before entering the service.

Changes in Society Office

Phyllis Morgan, who has been working with physicians of Kansas for the past four years, resigned her position with the Kansas Medical Society November 1 to join her husband in a residence in Chicago. Mrs. Morgan was employed as a secretary in the office of the Procurement and Assignment Service during the war and joined the staff of the medical society a year and a half ago.

Miss Marian Cook, formerly with Kansas Business Magazine, Topeka, and Miss Leana Owen, who formerly worked for the Kansas Division of the American Cancer Society, are now employed in the offices of the Kansas Medical Society.

Circuit Course in Psychosomatic Medicine

A circuit course in psychosomatic medicine will be offered in five cities in Kansas, December 6-14, under the auspices of the Kansas Medical Society, the Kansas State Board of Health and the University of Kansas School of Medicine. Each course will consist of three sessions, one in the evening and two on the following day in the morning and afternoon. The program for each session will be from two and a half to three hours in length.

The courses will be offered at the following cities:

December 6-7—Pittsburg
December 8-9—Emporia
December 10-11—Salina
December 11-12—Wichita
December 13-14—Topeka

Dr. Robert C. Anderson, chief of neuropsychiatric service at Winter Veterans Administration hospital and assistant professor of neuropsychiatry at the Menninger Foundation School of Psychiatry, will head the speakers. Dr. Anderson has specialized in neuropsychiatry for 15 years and during the war was chief of the department of neuropsychiatry in the school of aviation medicine, Randolph Field, Texas.

Others to take part in the program are Dr. Roger E. Phillips, who served as a neuropsychiatrist in the Navy during the war and is now a senior resident at the Menninger Foundation School of Psychiatry, and Dr. James T. Ferguson, also a senior resident at the Menninger Foundation. Dr. Ferguson was in general practice in Kansas City prior to entering the Army in 1941, where he served for two years as neuropsychiatrist with an infantry division.

The program for the circuit course will include the following topics:

Origin and Etiology of the Neuroses—Dr. Anderson
Neurotic Manifestations—Anxiety and Depression—Dr. Ferguson
The Physician-Patient Relationship—Dr. Anderson
Common Neurotic Manifestations — Nervousness — Dr. Anderson
Management of Special Psychosomatic Problems—Dr. Ferguson or Dr. Phillips
Behavior Problems of Childhood—Dr. Phillips

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MAURICE L. JONES, M.D.
ASSOCIATE DIRECTOR

A.M.A. Directory Planned

Plans are now being completed for the publication of the 18th edition of the American Medical Directory, the first since 1942, according to information released this month by the A.M.A. Because of wartime restrictions and the shortage of paper and labor, the directory could not be issued during the last five years.

In order to secure accurate and complete information, the A.M.A. is mailing a directory card to every physician in the United States, its dependencies, and Canada, requesting data to be used in compiling the directory. Physicians are urged to fill in the information and return the card, even though no change has occurred since the 1942 issue was printed. That part of the information requested on the right half of the card will be used for statistical purposes only.

The directory is one of the most important contributions of the A.M.A. to the work of the medical profession in the United States. It gives dependable data on physicians, hospitals, medical organizations and activities and provides full information on medical schools, specialization in the fields of medical practice, membership in special medical societies, tabulation of medical journals and libraries, and miscellaneous information.

Any physician who fails to receive a directory card between November 15 and December 1 is asked to write at once to the Directory Department, A.M.A., 535 North Dearborn Street, Chicago 10, Illinois, so that a card may be sent to him. There is no charge for publishing the data and physicians are not obligated in any way.

Services of Academy-International

The Academy-International of Medicine, with headquarters in the Liberty building, Topeka, announces three new services of interest to component groups of the Kansas Medical Society and one new service for the benefit of physicians individually. Those of interest to county societies have to do with providing equipment and information for scientific programs built around motion pictures, and the service for individuals provides professional translation of scientific material.

A catalogue of professional motion picture films was recently issued by the Academy, and an expanded and more detailed edition is now being compiled. Such a catalogue is of great value to those planning programs including the use of motion pictures, and all film authors are urged to send their names and addresses, along with the titles of films, to the Academy for inclusion in the catalogue.

To facilitate showing films at medical meetings, the Academy offers the use of various pieces of equipment without rental charge, although users must pay express charges and a fee of $4.00 for transit insurance and servicing by a projector technician. Requests for the use of equipment should be sent to the Topeka office from six to eight weeks in advance of showing date, and should list equipment desired by number.

The motion picture projector equipment that is available includes the following: Eastman Kodascope Model EE, suitable only for showing 16 mm. silent film (No. S.P. 1); Bell and Howell Model Filmosound 179, suitable for showing either silent or sound-on-film, 16 mm. films, not to be ordered unless sound films are to be shown or its public address feature is desired (No. S. and S.P. 1); microphone, hand type, crystal, to be used only with No. S. and S.P. 1 (No. M. 1); projector screen, Model D.L., 52 x 70 inches (No. P.S. 1).

The microfilm projector equipment, for which there is no service cost, is as follows: Spencer microfilm reader (No. 1); S.V.E. microfilm reader, Model R.M. (No. 2); S.V.E. microfilm and slide projector, Model D.D. (No. 3); Argus microfilm and slide projector (No. 4); Three Dimension Company No. D.P. 300, microfilm and slide projector (No. 5). This equipment is designed for showing 35 mm. strip films and standard 2 x 2 slides.

The translation services offered by the Academy are the result of a survey of various abstracting and translating services. It was found that in most instances the work is being done by lay personnel without medical training, making possible loss of exact meaning because of professional technicalities and idioms. The Academy-International has set up a list of competent linguists who will translate foreign articles into English or English articles into foreign languages.

Complete information on the services of the Academy may be secured from the headquarters office at 214 West Sixth Street, Topeka, Kansas.

Study Shortage of Nurses

A study of the shortage of nurses is now being conducted by the American Nurses' Association through its national headquarters in New York with the hope that the public may be roused to a clearer understanding of the present crisis and the solution of the problem. Speaking for its 155,000 registered nurses, the association cited three factors as conducive to lack of interest among would-be-nurses, inadequate economic security and unsatisfactory conditions of employment, lack of adequate legal control of nursing by the states, and faulty distribution of nursing service.

Since 1873 when nursing schools were first established in the United States, the association reports, the nurse has been confronted with long hours, split shifts, lack of retirement provisions and minimum salary increases. Responsibilities have been greatly increased through the years. Statistics from the U. S. Department of Labor for the month of October, 1946, show that average cash salaries for nurses averaged from $170 to $175, with one out of four receiving less than $145. The majority worked a 48-hour week and a great many, owing to increased patient loads, worked 54 hours.

In reporting on legal control, the ANA reports a wide variation in the standards for accredited schools of nursing and for registration of professional nurses in the several states. The first registration law was enacted in 1903 and all states now have provision for the registration of professional nurses. However, only 26 states provide licensure for practical nurses and only two states have laws requiring licensure for all who nurse for hire. Without such laws in all states, the public is at the mercy of many unqualified and unlicensed persons.

On distribution of nurses the ANA's goal is nursing service for all who need it, regardless of economic status, in both rural and urban areas. Nurses, like those in other professional groups, tend to concentrate in metropolitan areas where research and educational facilities are available, where a more satisfying social life is possible, and where economic conditions are more favorable. To promote a more equitable distribution of nursing service, the ANA has organized a non-profit, nationwide counseling and placement service available without charge.

To give impetus to its program the ANA conducted a nationwide rollcall from Minneapolis by telephone, calling on the presidents of the nurses' association of the 48 states, the District of Columbia, Puerto Rico and Hawaii to pledge their support in the fight to solve the problem.

No. 208 in the "See Your Doctor" series

. . . published in behalf of the medical profession

To an audience of over 23 million people, in LIFE and other national magazines, Parke-Davis presents the message shown below.

A reproduction in full color will be sent on request. Write to Parke, Davis & Company, Detroit 32, Michigan.

Some things you should know about **your family doctor**

No. 208 in a series of messages from Parke, Davis & Co. on the importance of prompt and proper medical care.



IF YOUR family doctor were asked to value his own services, he would probably pass over the number of lives he saves in times of crisis.

He would be likely to think first of the day-to-day help he gives to the hundreds of people who look to him as a medical advisor and friend.

For your family doctor—and every family doctor—is primarily concerned with *people*. He knows each of his patients as an individual human being whose physical make-up and reactions, whose personal problems are never quite like anyone else's.

Following you through the years, he gains a unique understanding of you as a person.

He knows whether you have, normally, a fast pulse or a slow one; whether you run a high temperature on slight provocation, or only in serious illness.

He knows what strains your job places on you; what your past problems have been; what to look out for as a danger signal in the future.

This knowledge, which deepens every time he sees you, serves him well when you are ill. For he can judge the importance of your symptoms against the background of your individual history.

With this knowledge he can also help you *avoid* many kinds of illness. By detecting and taking care of minor ailments early, he can often keep them from becoming serious.

By his years of training and experience, and his continuing study of advances in medical science, your family doctor is qualified to deal with the many and varied medical problems that arise in his daily practice.

Give him your complete confidence at all times and follow his recommendations.

Should he suggest a consultation with a fellow physician, or advise you to go to the hospital, you can be sure that such advice is based on his broad general knowledge of medicine plus his familiarity with your particular case.

SEE YOUR DOCTOR. Make him a part of your family's life. His continuing supervision is your best guarantee that your children will grow up well and strong, and that you will live a long and healthy life.

And through the years, turn to him whenever you are troubled by a problem concerning your health. His wisdom and friendly understanding make him the best counselor anyone could hope to find.

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Committee on Mental Health

A new group has been added to the roster of committees of the Kansas Medical Society, the Committee on Mental Health. Seven members of the Society have been asked to serve on this committee which will be requested to advise the State Board of Health with reference to a mental health program that is being contemplated for Kansas. The committee will also take an active part in all phases of this subject, scientific instruction for physicians, assistance for state mental institutions, and guidance to lay organizations interested in this topic.

Dr. L. S. Nelson, president of the Kansas Medical Society, recently appointed the following members to serve on this committee: Dr. Edward D. Greenwood, Topeka, chairman; Dr. Ralph L. Drake, Wichita; Dr. Thomas L. Foster, Halstead; Dr. Lloyd W. Hatton, Salina; Dr. Charles C. Hawke, Winfield; Dr. John A. Holmes, Lawrence; Dr. Will C. Menninger, Topeka.

The Education of the Surgeon

"The Education of the Surgeon" is the title of an address given by the late Dr. Elliott C. Cutler, Moseley professor of surgery, Harvard Medical School, on the occasion of a meeting of the Boston Surgical Society when he was presented with the Henry Jacob Bigelow gold medal. Dr. Cutler was the eleventh recipient of the award during the past 25 years. The complete address was printed in the September 25 issue of the New England Journal of Medicine.

"The education of the surgeon really does not begin until he leaves medical school," Dr. Cutler said. "Yet teachers in graduate schools must consider the early education of the student material handed on to them. It is always to be regretted that in the primary schools little thought is given to the scientific method. All early education is either logic (mathematics) or memory, and memory is the simplest of intellectual functions. And it has seemed a pity that the student's powers of observation and the synthesis of ideas should not have been given some practice."

Dr. Cutler, who believed medical school education should be sufficiently broad and sound to allow the student to enter at once into training as a surgeon, decried the value of the rotating internship year, now so widely proposed throughout this country, in the education of the surgeon. He proposed instead that the student study the whole hospital plan of the institution where he is to be an intern and where he can acquire his complete surgical education, usually requiring five or six years. By that time he should be fully qualified in the technical art of surgery, should have had enough experience to be proficient in the handicraft side of surgery and, by having been given responsibility as a resident surgeon, should have developed confidence in the practice of his art.

The internship proposed by Dr. Cutler would require 18 months and would be a graduated system in which the beginner progresses from little responsibility to greater responsibility. The intern could begin as a worker in the clinical laboratory, progress to senior intern on the ward, with perhaps the most junior intern under him, and thus have the opportunity of teaching. The internship is most valuable if the young surgeon goes to a hospital where all aspects of surgery are covered, and preferably where they are grouped under the chief surgeon.

Toward the end of this tour of duty, Dr. Cutler recommended work in the outpatient department with the opportunity of caring for ambulatory patients who are his direct charge and responsibility, while he himself is under the careful guidance of staff members as well as the residents on his own service.

"It is proper to remark that the appointment of an intern is the most important responsibility of the staff of a hospital," Dr. Cutler said. "If the material chosen is good, there will be a happy house staff and an excellent *esprit de corps*. Moreover, if the interns are competent, the better ones chosen to be assistant residents later on will be of superior caliber, and at the weeding-out process continues, excellence always remains."

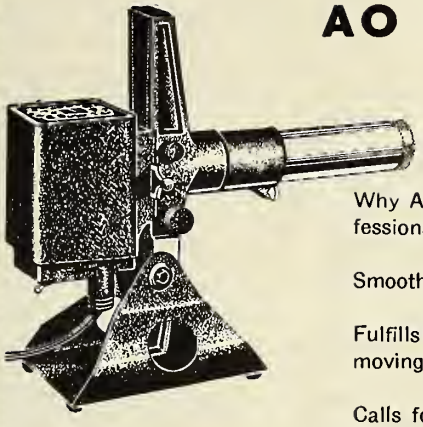
After internship the surgeon should spend about two years as an assistant resident, with most of his time on the general surgical wards and periods of about four months in genitourinary surgery, neurologic surgery, orthopedic surgery and gynecology. This period will disclose to him the limitations as well as the possibilities of surgery as a therapeutic agent, and by the end of the time he should be able to perform with safety most of the standard procedures.

The next step in Dr. Cutler's plan is a year in a laboratory, a year he regards as a critical turning point in the career of the young surgeon because, for the first time, he really begins to think independently. "I have long regarded a year in the laboratory as the period that rapidly differentiates growing young surgeons and in which one can soon pick the good, the bad, the indifferent and the exceptional men," Dr. Cutler explained. "The young surgeon, coming from a busy life in which each moment has been dictated by necessity, is often downcast and depressed when put in a laboratory by himself, particularly so if he is left alone and not helped. He feels lost, as if there were nothing to do... He has been given a problem but does not seem to know how to go about it. It is unwise for even the most generous teacher to help his pupil at that time. Once the young man has learned to think out a problem, stand on his own feet and go to the library and read books, he bursts into his chief's office full of new ideas, and the world is a different place for him. From then on, his chief can work with him in the laboratory...

"Thus, at the end of four and a half years the surgeon is well trained. He has acquired the technique and the handicraft of surgery, and he has learned how to think. The momentous changes may never be known to anyone but his chief, but the latter will recognize that the change has occurred and that another safe surgeon is ready to carry the torch.

"I have spoken as if the product was complete and finished. That is not fully true, although the young surgeon will do well anywhere with the training he has obtained. But this man can be better prepared by being given greater experience and responsibility. This is especially true if he anticipates leading the life of the teacher and investigator in surgery. I have pointed out that only one person receives full benefit from an operative procedure, and that is the surgeon conducting the operation. As an intern, a few simple surgical procedures can be given to the young surgeon under guidance; while he is assistant resident more procedures should be permitted him, and he can safely conduct the simpler ones without assistance but not the greater procedures, which therefore should not be completely relegated to the young surgeon...

"A final year in the hospital as resident surgeon will give to the assistant resident surgeon all this assurance and polish and will leave him time to begin to put together his first medical contributions... This resident surgeon represents the finished product in the education of the surgeon. He has been given exceptional experience and great advantages. On his shoulders rests the responsibility for educating another generation of surgeons."



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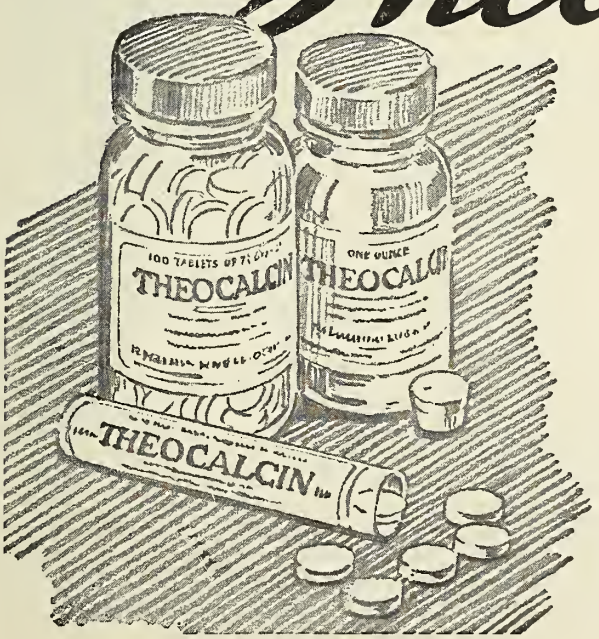
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Parergon Published

The 1947 issue of Parergon, published by Mead Johnson and Company to show artistic works by physicians, has been printed and is now available without charge to doctors who request it from the company offices at Evansville 21, Indiana. The current edition numbers 208 pages and gives 1100 examples of creative art.

Academy of Allergy to Meet

The American Academy of Allergy will hold its annual convention at the Hotel Jefferson, St. Louis, December 15-17 inclusive. The program will include papers on the latest methods of diagnosis and treatment and the results of investigation and research. Round table conferences will be held on Monday afternoon. Scientific and technical exhibits will cover a wide variety of conditions where allergic factors may be important.

All physicians interested in allergic problems are cordially invited to attend the sessions as guests of the Academy by registering without payment of fee. Copies of the program may be obtained from Charles H. Eyermann, M.D., 634 North Grand Boulevard, St. Louis, Missouri.

Essay Contest on Medical Topic

The Association of American Physicians and Surgeons announces its second annual national essay contest for high school students and advises that the topic for this year's essays is "Why the Private Practice of Medicine Furnishes this Country with the Finest Medical Care."

The contest is open to all high school students except sons and daughters of physicians. Essays are limited to 1500 words and must be submitted on or before April 15, 1948. A first prize of $1,000 is offered with other prizes of $500, $100 and $25. Inquiries regarding the contest should be addressed to Joseph Bunten, M.D., Suite 704, 360 North Michigan Avenue, Chicago 1, Illinois.

Study of Nursing Situation

The A.M.A. committee appointed by the House of Delegates to study all phases of the nursing situation has held its first meeting and will hold a number of joint meetings with nursing organizations and the American Hospital Association before reporting at the A.M.A. session to be held in June, 1948.

Dr. T. P. Murdock of Meriden, Connecticut, chairman of the committee, says the group will approach the problem on the basis of the number of nurses in the United States at present, the number needed, the number of students in nursing schools, the number that should be enrolled, the matter of retirement funds, the curriculum in nursing schools, the question of increasing or lowering of nursing standards, and the subject of administrative work.

Campaign to Combat Heart Disease

The nation's leading cause of death—diseases of the heart and circulation—will be attacked for the first time through a direct appeal to the public for funds, the American Heart Association has announced in disclosing plans for its 1948 observance of National Heart Week, beginning February 8. Because of the neglect and ignorance surrounding this problem, the association will emphasize its campaign of research, education and community service.

The association proposes wide dissemination of public information regarding heart diseases and rheumatic fever and scientific progress that has been made in their prevention, care and treatment. The drug industry and other business groups will cooperate by placing plastic heart-shaped collection boxes in retail outlets to aid in fund raising. A special gift campaign will be conducted. Educational work will be sponsored by local heart associations, by various women's groups, by national organizations such as the American Legion, Rotary International, and Kiwanis International.

"One death a minute is caused by diseases of the heart and circulation," said Dr. Arlie R. Barnes, president of the association. "This is a greater toll than the next five causes of death combined—cancer, accidents, nephritis, pneumonia and tuberculosis. Yet it ranks far below these ills in the amount of funds expended annually to study and combat it."

The year-round program of the association calls for extensive research, postgraduate education of the medical profession, establishment of standards for providing aid for clinics, hospital care, nursing care, occupational therapy, vocational guidance, medical social service facilities, periodic health examinations, heart disease prevention programs, development of community programs for the control of rheumatic fever, health education of the public and professional groups, and aid to the cardiac in employment.

A separate group in the organization, the Council on Rheumatic Fever, is concerned specifically with problems arising from rheumatic heart diseases which cripple and kill more children of school age than any other disease. Rheumatic fever is a major disabling chronic disease, causing 40 per cent of all heart disease at all ages and 90 per cent of heart disease in children.

Exhibits at Cleveland Meeting

Technical and scientific exhibits will be open during the four days of the A.M.A. supplemental session in Cleveland, Ohio, January 5-8, 1948. Since the meeting on Monday and Tuesday will be devoted largely to industrial health, that subject will be well represented in the scientific exhibit section. Other subjects to be emphasized are cancer, heart disease, first aid in motor accidents, diabetes, hearing aids, dermatology in general practice, endocrine diseases and nutrition. Question and answer conference rooms will be available to physicians seeking specific information, and motion pictures will be shown continuously throughout the week in an area adjoining the exhibits.

Death Notices

BENJAMIN LANE PHILLIPS, M.D.

Dr. B. L. Phillips, 66, died at his home at Paola October 21. He received his medical education at the University of Kansas School of Medicine and practiced first at Drexel, Missouri. He opened an office in Paola in 1928 and continued to practice there until three years ago when he retired because of poor health.

* * *

ADAM HANCOCK ADAMSON, M.D.

Dr. Adam H. Adamson of Arcadia, an active member of the Crawford county society, died at Pittsburg October 21 after a year's illness. Born in 1882, Dr. Adamson studied medicine at the University Medical College of Kansas City and received his license in 1913. He practiced first at Hepler and then opened an office in Arcadia, where he practiced for more than 30 years.



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Publication for Women's Auxiliary

At the request of the Board of Trustees of the A.M.A., Dr. Morris Fishbein, editor of the Journal, has taken preliminary steps toward the establishment of a periodical for the Women's Auxiliary to the A.M.A. It is thought that the first issue will be published soon.

World Medical Conference

Four American representatives to the World Medical Association meeting in Paris have returned to the United States and will soon report on the session in the JAMA. The four were Dr. E. L. Henderson, Louisville, Kentucky, Dr. Louis H. Bauer, Hempstead, New York, and Dr. Ernest L. Irons, Chicago, all members of the AMA Board of Trustees, and Dr. R. L. Sensenich, South Bend, Indiana, president-elect of the AMA.

The association will be an advisory arm of the World Health Organization, which in turn is under the wing of the United Nations. Forty-one countries were represented at the meeting. The American physicians visited several European capitals and, as the Chicago Tribune stated, made it plain that "they wouldn't swallow any political pills from totalitarian countries in the formation of a new world medical organization."

Television for Surgical Education

Special big-screen television sets for educational use in observing medical operations are now being planned by United States Television Manufacturing corporation, in response to the need for such sets expressed by medical people.

Recently surgical operations were telecast and viewed on 15 receivers by 5,000 doctors as part of the program at the meeting of the American College of Surgeons. The success of the demonstration caused predictions of the great future of television in the teaching field, but it was felt that larger screens would be of benefit.

"The larger the screen the better the observation since more detail is brought out," said Dr. John H. Mulholland, chairman of the department of surgery at the N.Y.U. College of Medicine. Only one or two surgeons can get close enough to an operation to take away additional knowledge, he explained, and the number of surgeons viewing an operation by television can be expanded by any number of television screens.

Fellowships in Cancer Research

Fellowships in cancer research, administered by the Committee on Growth of the National Research Council, have been announced by the American Cancer Society to provide opportunities for training and experience in research for men and women who are fitted for scientific investigation. The fellowships are intended for recent graduates who, as a rule, are not more than 30 years of age.

Stipends are determined by individual circumstances, usually from $2,000 to $3,000 per annum with an additional $500 to the institution in which the fellow works to cover laboratory expenses. Applications should be filed before December 1 with the Committee on Growth, National Research Council, 2101 Constitution avenue, Washington 25, D.C.

Public Health Nurse Shortage

Although more nurses are engaged in public health work this year than at any previous period, the number is failing either to meet current needs or to keep pace with the increasing population, according to the 1947 annual

census of public health nurses. State and local public health agencies reported a total of 21,171 nurses on their records for January 1, 1947.

There are 2,489 vacancies in budgeted positions reported by the states, and in January there were 1,087 counties that had no rural public health nursing services. In addition, nurses are needed for expanding programs in the fields of mental hygiene, cancer control, and nutrition.

Upjohn Open Chicago Branch

The Upjohn company, Kalamazoo, Michigan, manufacturers of pharmaceuticals since 1886, will open a branch office and warehouse in Chicago on January 1, 1948. The Chicago unit will employ about 50 people at the start and will be in position to give fast service to customers in the area.

Books Received

The Selected Writings of Benjamin Rush. Edited by Dagobert D. Runes. Published by the Philosophical Library, Inc., New York. 433 pages. Price $5.00.

Practical Clinical Psychiatry. Sixth Edition. By Edward A. Strecker, M.D., Franklin G. Ebaugh, M.D., and Jack R. Ewalt, M.D. Published by the Blakiston Company, Philadelphia. 476 pages. Price $5.00.

A Textbook of Clinical Neurology. Sixth Edition. By Israel S. Wechsler, M.D. Published by W. B. Saunders Company, Philadelphia. 829 pages, 162 illustrations. Price $8.50.

Gifford's Textbook of Ophthalmology. Fourth Edition. By Francis H. Adler, M.D. Published by W. B. Saunders Company, Philadelphia. 512 pages, 310 illustrations. Price $6.00.

Pharmacology, Therapeutics and Prescription Writing. Fifth Edition. By Walter Arthur Bastedo, M.D. Published by W. B. Saunders Company, Philadelphia. 840 pages, 82 illustrations. Price $8.50.

Laboratory Manual of Microbiology for Nurses. By Elizabeth S. Gill, R.N., and James T. Culbertson, Ph.D. Published by G. P. Putnam's Sons, New York City. 116 pages. Price $1.50.

History of Medicine. By Cecilia C. Mettler, Ph.D. Edited by Fred Mettler, M.D., Ph.D. Published by the Blakiston Company, Philadelphia. 1215 pages, 16 illustrations. Price $8.50.

ANNOUNCEMENTS

December 6-11—Sixth Annual Meeting, American Academy of Dermatology and Syphilology, Chicago. Principal sessions at Palmer House, courses at medical schools of University of Illinois, Northwestern University.

December 15-17—Annual Convention, American Academy of Allergy, Hotel Jefferson, St. Louis, Missouri.

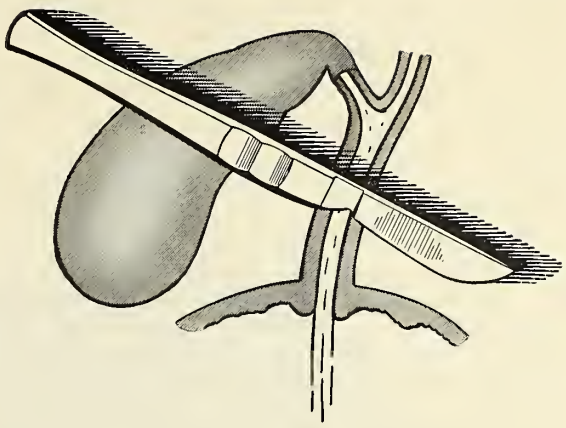
January 5-8—Midwinter Meeting, House of Delegates, American Medical Association, Cleveland, Ohio.

January 7-8—Scientific Session for General Practitioners, American Medical Association, Cleveland, Ohio.

April 19-23, 1948—Twenty-ninth annual session, American College of Physicians, Civic Auditorium, San Francisco, California.

May 6-8, 1948—Annual Meeting, American Association for the Study of Goiter, King Edward Hotel, Toronto, Canada.

MAY 10-13—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, WICHITA, KANSAS.



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ABSTRACTS

Reiter's Syndrome

Bernard D. Pinsk, Am. Jnl. Med. Sc., 214:76-79, July 1947.

The author reports 12 cases seen by him in two years and feels it is therefore not rare. Reiter, in Germany in 1916, described this syndrome of unknown etiology, a triad of urethritis, arthritis and conjunctivitis which still defies all therapy (penicillin, sulfonamides, arsenicals, salicylates, fever, etc.) Is generally complete within a month and recovery has usually occurred in three to four months. Dr. Pinck's cases were males aged 19 to 34, and only one gave a family history of arthritis. Until the present series, less than 80 cases in 29 articles had been reported and American descriptions appeared first in 1942. The cardinal feature of the syndrome is the arthritic phase. The temperature becomes suddenly elevated, affected joints are red, hot, swollen and tender. Involvement may be uni- or poly-articular and migratory. Knees and ankles are most commonly affected and less frequently were the wrists, hips, inter-phalangeal finger and the temporomandibular joints. Joint aspirations (hydroarthrosis of the knee occurred in six cases) revealed serous fluid of low protein content and 10,000 to 20,000 wbc per cu mm with polymorphonuclears predominating. In the acute phase leucocytosis ranged from 10,000 to 22,000 and the sedimentation rate was elevated.—*P.W.M.*

* * *

Amputation of the Index Ray

J. H. Mahoney, G. S. Phalen and W. H. Frackelton, Surgery, 21:911-918, June 1947.

The authors found that patients in whom amputation of the index finger was necessary proximal to the proximal interphalangeal joint complained of poor function of the hand. This was due to the stump being "in the way." All patients were reamputated with removal of the second metacarpal bone, just distal to the base.

Manual dexterity was improved in all 18 patients. All were able to use the hand much more efficiently than before. Six illustrations, three references.—*F.W.F.*

* * *

Postoperative Thromboembolism

Some Remarks on Influence of Early Ambulation, J. H. Bowers in Am. Jr. Med., 3:224-230, August 1947.

This is an analysis of 1,519 major surgical cases. "Early" ambulation is defined as walking in six to 24 hours postoperatively; "accelerated" indicates ambulation on the second to fourth postoperative day; "delayed" indicates the traditional rest in bed. Of 537 cases having "early" ambulation, 5.8 per cent had thromboembolism and there were 0.56 per cent deaths from embolism. Of 204 cases with "accelerated" ambulation there was an incidence of 6.8 per cent thromboembolism with 0.49 per cent deaths. Of 647 "delayed" ambulation cases, there was 5.4 per cent thromboembolism with 1.08 per cent deaths.

The author concludes that, while early ambulation does not influence the incidence of thromboembolism, it does reduce the fatalities from massive pulmonary embolism. It also permits an earlier return to normal activities.—*F.W.F.*

* * *

Prognosis of Wolff-Parkison-White Syndrome

J. Leroy Kimball and George Burch in Ann. Int. Med., 27:239-242, August 1947.

These authors briefly review the characteristics of the Wolff-Parkinson-White syndrome as characterized by (1) a short P-R interval (2) prolonged and deformed QRS complexes, (3) normal P-S interval and a tendency to paroxysmal tachycardia. The prognosis has been considered benign by many.

However, a review of the literature showed six instances of death, two probably a result of the syndrome, and four undoubtedly due to it. F. N. Wilson in 1938 reported a patient who died during an attack of paroxysmal tachycardia with no evidence of heart disease except the W-P-W syndrome. In 1942 Vahil reported a patient with the syndrome complicated by mitral stenosis who died in congestive failure resulting from frequent prolonged attacks of paroxysmal tachycardia. In 1943 Nielson et. al. reported a patient with paroxysmal tachycardia and the W-P-W syndrome, whose course terminated in death. Wood, Wolferth, and Gechler in 1943 reported the case of a 13-year-old boy with the syndrome who died in congestive failure two hours after the onset of an attack of paroxysmal tachycardia. Ohnell reported two fatalities in cases presenting the syndrome, one occurring during an attack of tachycardia, and the other probably a result of paroxysmal tachycardia.

These authors add two fatal cases to the series. One was a 38-year-old woman with W-P-W syndrome, negative physical examination, and a history of attacks of palpitation and rapid heart, who was found dead in bed two weeks after an episode of paroxysmal tachycardia treated with quinidine. The second, a male child seven months old at time of death, had a W-P-W syndrome by electrocardiogram, repeated attacks of paroxysmal tachycardia resulting in congestive failure, and death after generalized convulsions following an episode of tachycardia. At autopsy two aberrant bundles of muscle tissue were found, one connecting the right atrium with the right ventricle and the other connecting the left atrium with the left ventricle.

The conclusion is that prognosis in W-P-W syndrome should be guarded.—*E.J.R.*

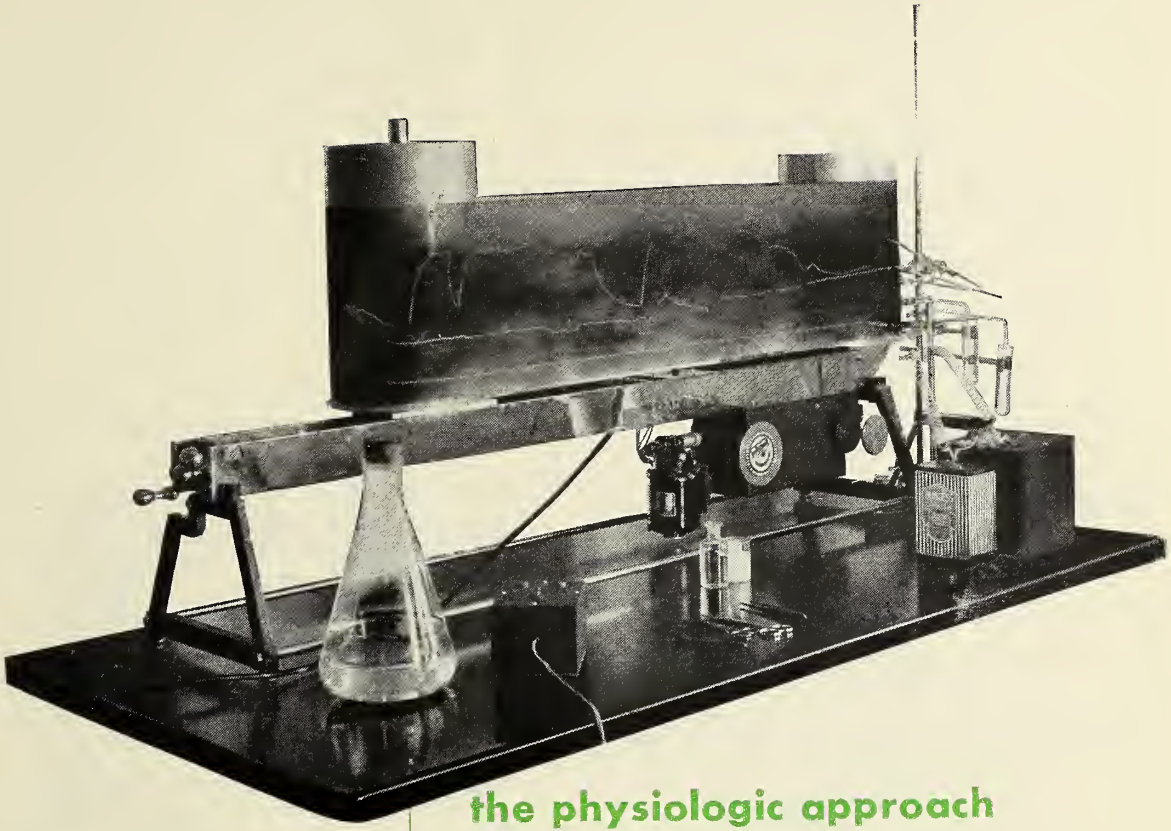
* * *

Sub-Mucous Hemorrhoidectomy

The Surgical Treatment of Hemorrhoids, Arthur S. Calman, M.D., Monograph, June 1947.

It has been with some disappointment that this reviewer has evaluated his results following hemorrhoidectomy performed by the conventional technic of radial excision with clamp and ligature in which a wedge of skin is excised and left open. Postoperative pain, subcutaneous edema in the adjacent tissues, occasional delayed bleeding, and subsequent stricture, usually of a mild degree only, have occurred in too many instances, both in the experience of the writer and of his colleagues in military service.

It has thus been with some interest that he has followed the reports of Dr. Arthur S. Calman of New York City concerning hemorrhoidectomy by a technic designed to be a-traumatic and to provide as nearly as possible a restoration of normal anatomy following operation. Dr. Calman advocates dissection of the mucosa overlying the hemorrhoid with simple ligation of the pedicle of the dilated vein and excision of the venous mass distal to the ligature. The mucosal flaps are then permitted to fall back over the denuded area where they agglutinate in a manner comparable to wide-based pedicle grafts. Dr. Calman reports that in some 50 cases he has encountered no postoperative hemorrhage and no case of stricture. Advocates of the conventional technics mentioned above have pointed out that unless a wide skin defect is left there is danger of infection developing beneath the overhanging cutaneous



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margin. This complication does not appear in Dr. Calman's series of cases.

In the present writer's very limited experience Dr. Calman's results have been repeated, and in the judgment of this reviewer the method deserves further trial.—*T.P.B.*

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AN INQUIRY INTO THE CAUSES FOR BLEEDING FROM UTERINE MYOMATA*

Lester D. Odell, M.D., and Joseph Scott, M.D.**

Chicago, Illinois

An increase in menstrual flow is generally considered to be a predominate sign of uterine myomata. This association of bleeding and tumors has become so emphasized in our thinking that myomata are usually expected to bleed, sooner or later, and hysterectomy is often advised or performed in anticipation of such an event.

Actually uterine myomata may occur with or without an increased bleeding. Thus, Emmett[1] reported the menstrual flow as increased in 50 per cent, unchanged in 20 per cent, lessened in 16 per cent and irregular in 13 per cent of all cases. Furthermore, some tumors may never become associated with abnormal bleeding. When one considers that 11 to 20 per cent of all women over 30 years of age coming to autopsy have myomata, it is evident that a considerable number have these tumors for many years without any inconvenience and often without knowledge of their presence. If present, bleeding is usually in the form of menorrhagia (a cyclic increased bleeding) or a metrorrhagia (irregular or continuous bleeding), the former being considered to be the more frequent, although hypermenorrhea, polymenorrhea or meno-metrorrhagia (a seemingly combined menorrhagia and metrorrhagia) may be the presenting bleeding complaint instead.

Myomatous tumors seldom bleed in themselves. Occasionally a pedunculated submucous nodule becomes ulcerated and bleeding may occur. But, by and large, such is not the usual occurrence, since these tumors have little influence upon the endometrial flow stimulated by ovarian hormones.

Uterine myomata may become associated with symptoms or signs other than bleeding. Thus, infertility and sterility, pressure symptoms and pain may be present; although the latter (pain) is more frequently associated with adenexal disease.

Our material for this study was obtained from the records of patients with myomata on the services of the Department of Obstetrics and Gynecology, University Hospitals, Iowa City, Iowa, and the Gynecologic Service, Chicago Lying-in Hospital. Whenever the uterus, ovaries, tubes and cervix were removed, the gross and microscopic pathology was carefully noted by the authors. In the ovaries particular attention was paid to the presence or absence of recent corpora lutea or cysts; in the tubes for inflammation; in the uterus for the number, size and location of tumor nodules, degeneration processes, and the thickness of endometrium. In addition, the uterine volume was obtained by filling the extirpated organ with mercury to measure the amount of this liquid the uterus held.

Many patients with myomatous tumors suffer from dysfunctional bleeding. Both Novak[2] and Hamblem[3] have emphasized the failure of ovulation in such cases; the curettings usually show a proliferative endometrium, either hypoplastic, hyperplastic, or of normal thickness. The cause is chiefly an endocrine failure, probably ovarium, possibly secondary to a failure of pituitary stimulation. Due to experimental work on rodents, wherein estrogen administration resulted in intraabdominal fibrous tumors[4], the trend of thought has been that both dysfunctional bleeding and fibromyomata are the result of an increased estrogen stimulation. The increased incidence in such patients of cystic ovaries, which are known to contain a high titre of estrogens, supports this concept. Furthermore, endometrial hyperplasia has been reported in increased incidence in patients with uterine fibroids[5, 6, 7], although other studies[8, 9, 10, 11, 12] have pointed out that the incidence of endometrial hyperplasia in such cases of bleeding is no higher by comparison with bleeding non-fibroid patients. And, in addition, a normal excretion of urine estrogens has been described in cases with fibromyomata and dysfunctional bleed-

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**Department of Obstetrics and Gynecology, University Hospitals, University of Iowa, Iowa City, Iowa.

ing[13]. So the probabilities are that an increased blood level of estrogens is not directly responsible for the bleeding encountered.

Graves[14] has observed that patients with dysfunctional bleeding and fibromyomatous tumors are apt to experience a short period of amenorrhea preceding the bleeding, thus simulating a pregnancy episode. The bleeding is usually metrorrhagic, accompanied by the passage of clots, but usually without pain. It is significant (Table I) that a relatively high percentage of our patients with metrorrhagia had no evidence in their ovaries of recent corpora lutea. These cases probably were experiencing anovulatory periods, and their bleeding was dysfunctional in origin.

TABLE I

Fibromyomata—Ovulation

	Ovulation	*No Ovulation*	*Total*
No symptoms	8	2	10
Menorrhagia	16	12	28
Metrorrhagia	3	12	15
Meno-metrorrhagia	4	2	6
Total	31	28	59

Frankl[15] has described a rich network of blood vessels below the endometrium in non-ulcerated submucous tumors. It was his belief that such vessels rupture during menstruation and that this leads to an increased and prolonged menstrual flow. Some modern textbooks subscribe to this theory. Sampson[16], using a dye injection technique, found that both regular (menstrual) and irregular bleeding from myomatous uteri was chiefly from venous sources, rarely arterial. However, it is known that the endometrium over submucous tumors is quite thin and atrophic, without glands or stroma, and rarely takes part in the normal menstrual shedding and, therefore, probably contributes little to the bleeding which results. Furthermore, only a relatively small percentage of tumors are submucous in location, 6.8 per cent in our series (Table II). These can hardly account for the menorrhagia, which composes, according to Schroeder,[17] 75-80 per cent of the increased bleeding associated with uterine fibromyomata. In addition, we have closely examined the endometrial surfaces of uteri with fibromyomata and have been singularly impressed by the consistent absence of any distinctive ulcerations or bleeding points.

TABLE II

Fibromyomata—Location

	Number	*Percent*
Subserous	101	30.3
Intramural	241	62.9
Submucous	25	6.8
Total	367	100

Albrecht[18] suggested that intramural myomata produce a distortion and enlargement of the uterine cavity, thus resulting in a gradual increase in the menstrual surface. The usual patient with bleeding and tumors recites a history of a gradual increase over months or years in the amount of menstrual discharge; in short, a menorrhagia. Although the normal uterine volume is rarely above 10 ml., and although patients with no bleeding symptoms or those with metrorrhagia have a relatively low volume (Figure I), many uteri from patients with menorrhagia hold a large amount of mercury. These organs probably have an increased menstruating surface from the growth and distortion of intramural tumors. We believe such an explanation accounts for at least 50 per cent of the menorrhagia encountered in such cases. And, because of the lack of corpora lutea in the ovaries of the remainder, one must conclude that menorrhagic bleeding in them is probably of dysfunctional origin (Table I).

The following case histories illustrate some of the factors involved in bleeding from uterine myomata:

Case 1. Metrorrhagia.

A.S., 43-7366, aged 46, P_4 G_4, L.M.P. 7/4/43, was admitted on 7/13/43 with complaint of irregular bleeding during past six months, one hem

FIGURE I

UTERINE VOLUME



orrhagic episode having lasted 31 days. Past history disclosed a six-year period of infertility following last pregnancy 18 years previous. Menarche and previous menstrual history were normal except for a three-week bleeding episode 17 years previous. Examination disclosed hgb. 8.9 gms, B.P. 130/75, approximately normal pelvic organs except for a few nodules on the uterus. On 7/19/43 a curettage and hysterectomy was performed. Gross: Uterus—symmetrical, measuring 4x6x3.5 cm., capacity 7 ml, myometrium 1.5 cm., endometrium 1.0 mm. Tubes—normal, no recent corpora lutea. Tumors—three small intramural, largest being 1.5 in. in diameter.

Microscopic: Endometrium—proliferative, resting. Fibromyomata—hyalinization.

Obviously, in this case the bleeding was anovulatory, not related to an increased menstruating surface, and probably dysfunctional in origin. Nevertheless, it was excessive enough to cause a severe secondary anemia.

Case 2. Menorrhagia.

K.B., 43-6016, aged 51 years, P_4, G_4, L.M.P. 5/14/43, was admitted on 6/11/43 with menorrhagic (cyclic) bleeding for several years, worse during the past eight months. Menarche and previous menstrual history were without complications. Examination disclosed hemoglobin 7.5 gm., B.P. 135/75 mm. Hg., and a nodular uterine mass 20-25 cm. in diameter. On 6/12/43 a total abdominal hysterectomy and bilateral salpingo-oophorectomy was performed. Gross: Uterus—asymmetrical, measuring 15x21x12 cm., capacity 70 ml., myometrium 4 cm., endometrium 3 mm. Tubes—normal. Ovaries—left 5x3x1.0 cm. with old corpora lutea, right 5x3x1.2 cm. with one old corpus luteum. Tumors—two subserous nodules 6.5 and 4 cm., two submucous nodules 6 cm. and 4 cm. with no areas of ulceration, four intramural nodules of which the largest was 7 cm. in diameter, and one intramural and subserous tumor 6 cm. in diameter. Microscopic: Endometrium was thin and atrophic over submucous tumor, otherwise secutory.

In this second patient, menses were probably ovulutory and menorrhagia was the result of an increased menstruating surface, as evidenced by the large uterine volume.

Much of our modern treatment for fibromyomatous tumors may depend upon our favorable birth rate and upon our American surgical traditions. In England, where the birth rate is low, some surgeons, notably Bonney[20], favor myomectomy in the treatment of myoma as the procedure of choice. The first completed supra vaginal hysterectomy for myomatous tumors is credited to an Englishman, Heath, in 1845, with a fatal result. But it was an American, Burnham, of Lowell, Massachusetts, who in 1853 successfully removed a fibromyomatous uterus by abdominal operation and cured the patient. It is of interest that Burnham performed 15 hysterectomies during his lifetime from which only three patients survived. Subsequently, the Americans, Kimball, Noeggerath, Cutter, Trenhome, Marcy, Dixon-Jones, Eastman, Polk, Kelly, Baldy and Krug contributed much to our present-day knowledge of the surgical treatment of myomatous tumors.

At the Lying-In hospital the usual treatment for symptomatic tumors is a surgical removal of the uterus and cervix by the abdominal route. If the patient has diseased ovaries and tubes, or if she is over 40 years of age, all pelvic organs are excised. Asymptomatic tumors may be treated by observation if they are small or if we are sure of the diagnosis. We seldom perform myomectomy except during pregnancy. Miller[19], who removed 10 per cent of all fibroids by myomectomy, reported that 1.5 per cent developed acute intestinal obstruction postoperatively. Of those patients who became pregnant 0.75 per cent developed acute intestinal obstruction and 0.75 per cent of all had chronic partial obstruction. There was a primary mortality of 0.8 per cent. Bonney[20], who has made a hobby of myomectomy, reports the removal of 125 fibroids from one uterus; 52 out of 137 of his patients in the childbearing period conceived; but he, also, reported a 1.2 per cent mortality rate in his first cases. The increased hazards following myomectomy have discouraged us from using such treatment.

The use of hormones, notably progesterone,[21, 22] for the treatment of uterine myomata is still in experimental stages.

We have not favored the use of radium or x-ray unless tumors are quite small or unless certain factors contraindicate surgery. If the tumor mass is less than the size of a three-month pregnancy radium may be used within the uterus. It is more efficacious than x-ray because it not only causes an amenorrhea but also has a sclerosing effect on the endometrium. The effective dose is 1800—2000 mg. hours. Radium is contraindicated whenever the uterus and tumor is larger than a grapefruit, if the tumor is pedunculated or painful, if previous pelvic surgery has been performed, if the patient is bleeding badly, if the tumor is cervical, if adnexal pathology is suspected, and if the patient is postmenopausal or under the age of 40. Roentgen-ray therapy entails practically no risk to the patient but requires weeks for its effect and is therefore of no use if hemorrhage is a prominent factor. In a recent review of this subject Schmitz and Towne[23] recommend 500 r.u. for the production of a permanent menolysis by x-ray. It is well to remember that radium and x-ray therapy are empirical treatments and for that reason should only be used in patients who are poor operative risks because of age, cardiovascular disease or other serious systemic disease.

Pedunculated submucous tumors should be removed through the vagina. Such tumors are frequently infected, and their removal abdominally with the uterus is dangerous. It is better to follow vaginal myomectomy by abdominal extirpation several weeks later, when necessary.

Obviously, one must be sure that such patients do not have uterine cancer, cervical or corporal. Careful inspection of the cervix, biopsy of all sus-

picious areas, and a preliminary curettage of patients over 40 years of age with abnormal bleeding will usually clarify this possibility.

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EVALUATION OF CARDIAC PATIENTS FOR SURGERY*

Mahlon H. Delp, M.D.**

Kansas City, Kansas

Implications of this subject encompass practically the entire field of medicine. Certainly their limitations are not within the study of cardiology alone. In years past every physician consulted by a patient with heart disease faced the problem of offering prognosis, as well as diagnosis and treatment. This information then was dispensed usually to the patient and his relatives only. With the development of medical specialization, and increasing success in making correct estimations of cardiac reserve, the internist was frequently called upon by the surgeon to share responsibility for the patient with heart disease requiring surgery. Later the obstetricians began requesting similar collaboration. Today we find the internist required to make this evaluation for the patient himself, the insurance company, the military service, the industrial employer, the surgeon and the obstetrician. Each of the above named individuals or agencies places certain demands, peculiar to their own requirements, upon the consultant. To fairly and accurately perform this task requires almost unlimited knowledge, and he who attempts such, makes but superficial penetration of the problem.

Between the surgeon and the internist frequently occur severe clashes of opinion. At least one reason for disagreement is the simple fact that cessation of the heart beat is traditionally one thing first noted in death. Hence, the surgical patient who dies has perhaps all too frequently been counted as a cardiac death. We all know that, experimentally, in both animal and man, the heart can be removed after death, recusitated, and kept beating for hours. Perhaps surgeons have over emphasized heart failure as a cause of operative mortality when the real explanation was surgical or medical shock, secondary to hemorrhage, infection, or pulmonary infarction. Another loose expression often used, and frequently baseless, is that of "death due to anaesthesia." Still another view shows the internist all too frequently dogmatic and positive in his favorable evaluation of cardiac patients as good surgical risks, ignoring our serious lack of accurate explanation for many deaths even in non-surgical cardiacs. In like manner, the internist fails to show proper humility in his opinions, in face of the inadequacies of methods of evaluation of the cardiovascular system. It is a challenge to the consultant to face this problem, to state his position, and to reveal the reasons and facts upon which each and every opinion is based. He does have certain criteria derived from statistical studies and observations of his own or others to guide him in making a decision. Chief among these published data are those of Marvin[1], Levine[2], Sprague[3], and Jensen[4]. A recent article by Clawson[5] contributes valuable information toward clarification with a large series of autopsies, showing the incidence of types of heart disease. It is important simply because it directs our thoughts toward the eventual necessary prognosis.

RELATIVE FREQUENCY OF HEART DISEASE

In Clawson's[5] series of 30,265 autopsies, there were 4,678 cardiac deaths. Etiologically these were classified as cases of rheumatic, bacterial, syphilitic, hypertensive, arterio-sclerotic, pulmonary hypertensive, and thyroid heart disease. There were 2,597 (55.5 per cent) hypertensive cases; 870 (18.6 per cent) rheumatic; 514 (11 per cent) bacterial endocarditis; 280 (9.5 per cent) coronary arteriosclerosis without hypertension; 1,215 (25.9 per cent) with

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**From the Department of Medicine, University of Kansas Medical School, Kansas City, Kansas.

and without hypertension (coronary arteriosclerosis); 327 (7 per cent) syphilitic heart disease. Thyroid heart disease, beri-beri heart disease, and congenital heart disease were so infrequently encountered as to have no bearing on the statistical picture. Such a large series of cases establishes without question all elements of statistical significance regarding frequency of etiological factors in heart disease.

Another source of recent and reliable information concerning incidence of heart disease is available from selective service statistics. Rountree[6] reported in 1944, after examination of 4,049,000 registrants of 18 to 37 years, that of 58 per cent disqualified for physical defects 6.5 per cent were rejected because of cardiovascular disease. As a part of the project in studying this group of rejectees, 4,994 were re-examined by picked teams of cardiologists. Of note is the fact, as reported by Levy, Stroud, and White,[7] that only 17 per cent of these men were resubmitted as suitable for class 1-A. In the 80 per cent agreed to have organic heart disease, 60 per cent were found to have rheumatic heart disease, 26 per cent hypertension, 5 per cent neurocirculatory asthenia, sinus tachycardia and congenital heart disease. Electrocardiographic abnormalities alone were found in 32 cases, syphilitic heart disease in 17, and coronary disease in 6. Here we have figures illustrating quite clearly how the age factor, when combined with etiology, begins to sharpen and limit the cardiologist's problem in evaluation and prognosis.

In 1930 Levine[2] reviewed 414 cases subjected to 494 operations. These represented major surgical procedures performed upon patients with organic diseases of the heart. For the purpose of estimating the part played by the heart, deaths were ingeniously typed as "unexpected" and "inevitable." He considered those patients appearing in the "unexpected" group to be those who would not have died had there been no operation. The "inevitable" patient was doomed because of heart disease. He observed three "unexpected" deaths in 147 operations upon patients with valvular heart disease, (2.1 per cent). In 167 operations on patients with hypertension, chronic myocarditis, etc., eight "unexpected" deaths occurred (4.9 per cent). Permanent auricular fibrillation was associated with three deaths (3 per cent) in 108 operations. Coronary disease was found to significantly increase the risk. In 41 operations on patients with angina pectoris, there were three (7.7 per cent) deaths. In 21 patients with coronary thrombosis there were eight (40 per cent) deaths. There was one death in 13 cases of syphilitic aortitis requiring surgery. Congestive heart failure was associated with (14 per cent) mortality. It becomes clear that congestive heart failure requires treatment and delay in surgery, hypertension and chronic valvular diseases entail minimal risks, and that chronic coronary disease adds materially to the hazards of operative procedures. There is a remarkable lack of any other similarly satisfactory group of cases reported in recent literature to confirm or deny interpretation of Levine's[2] conclusions.

FACTORS IN PROGNOSIS

With this panorama of heart disease, its general incidence, its etiological incidence, and the incidence of death in those cases undergoing surgery, we may proceed to a more detailed examination of factors in prognosis represented in the various common cardiac disturbances.

The recent widespread experience of surgeons dealing with cardiac surgery of all varieties reaffirms the common belief that the cardiac patient tolerates surgery very well. Surgery upon the congenitally deformed heart is being performed daily in numerous medical centers. The same situation exists with regard to surgical procedures such as sympathectomies upon the patient with hypertension. We can also easily recall the one time popular procedure of thyroidectomy as a treatment for angina pectoris. This ordeal, the patients apparently stood with remarkable fortitude.

Tempering the gloomy outlook of a generation past in regard to the cardiac patient going through labor or a surgical procedure are several items: (1) improved surgical technique, (2) improved anaesthetic agents and methods of administration, (3) improved methods of pre-operative cardiac evaluation, (4) more complete information and statistics permitting more favorable generalizations regarding the outcome of a given case, rather than reliance upon the disastrous single experience of one individual.

Rheumatic heart disease: By and large the outcome in this group of patients is very favorable if the heart is in compensation. Factors giving an unfavorable coloring will be even mild signs of decompensation, a history of decompensation, and the presence of auricular fibrillation. The latter sign is not in itself of serious import, if at a controlled rate. It seems needless to point out the importance, in the presence of indicated surgery, in delaying operation and in treating decompensation to a satisfactory status. The patient with a simple systolic murmur of mitral valvulitis presents no unusual risk. The compensated aortic insufficiency presents no unusual risk. It becomes immediately obvious that it is the state of the myocardium which is important.

Hypertension: An increase in blood pressure is not a contra-indication to any kind of surgery. A long standing hypertension with complicating coro-

nary insufficiency and decompensation presents a different outlook. Again the state of the myocardium is the important factor. Of additional import in this group of patients is the degree of impairment of kidney function. The latter must be taken into consideration in adequate cardiovascular evaluation.

Coronary sclerosis: An all important balance in cardiac function in cardiac health must be maintained between myocardial demands and needs of blood and oxygen as compared to that supplied through the coronary arteries. With the group of patients having coronary disease, the most difficult problem of evaluation is encountered. They are an old age group. They are subject to other complicating diseases. The diagnosis is one of inference. We can not feel the coronary arteries and thereby detect a reduction in their calibre. The diagnosis, then, must be made by inference, using all aids available. We are dependent upon the history of angina pectoris, typical and atypical. We are dependent upon signs of arteriosclerosis elsewhere. We are dependent upon the electrocardiogram to a greater degree here than any other type of heart disease.

In the patient with coronary disease there are two outstanding dangers possible as complications of surgery. The development of a serious and often fatal arrhythmia either during or following surgery is frequent, and often not detected or properly credited with responsibility for fatality. The fatal coronary thrombosis complicating a surgical procedure on the patient with coronary disease is so well understood as to require no elaboration. Such factors as precipitous drop in blood pressure, increased intravascular clotting, injudicious use of drugs, struggling of patients due to poor anaesthesia, and rapid rate arrhythmias, which create disproportionate blood demands by the myocardium, all represent danger items. Emergency surgery upon the patient with angina pectoris coming on at rest or with minimal exertion will, of course, be performed, but elective surgery never.

Syphilitic aortitis: The most important item in this entity is its recognition. Danger from syphilitic aortitis rests entirely upon interference with coronary irrigation. This statement is true short of frank cardiac decompensation. If the aortitis is sufficiently high grade to result in marked aortic insufficiency, its detection is easy; otherwise it may be very difficult. The patient with this lesion, who has anginal pain, becomes an increasingly less favorable risk than the patient free of pain.

Coronary thrombosis: Rather frequently patients who have suffered coronary thrombosis with myocardial infarction must have surgery. It is important that a correct diagnosis and proper evaluation be made in order that caution be exercised with regard to pre-operative and post-operative care as well as that a careful anaesthesia be given. Those danger items mentioned immediately above are of even greater importance in this group of patients.

Auricular fibrillation: This disturbance in rhythm is not in itself a contra-indication to surgery. A pre-operative pre-requisite is a normal ventricular response rate. There is a difference in prognosis much in favor of that auricular fibrillation secondary to mitral stenosis or thyrotoxicosis as compared with the prognosis in degenerative myocardial disease secondary to coronary insufficiency. In passing we may state that if the ventricular response is over 100 the patient should be treated with digitalis pre-operatively.

Premature systoles: In the healthy young adult this common arrhythmia has no significance. In the aged patient with coronary disease, premature contractions frequently indicate a high degree of myocardial irritability. This may be a warning of a critical arrhythmia likely to develop during the anoxia of an anaesthesia or a post-operative shock state. In this class of patients it should never be regarded lightly. Runs of extra-systoles in such patients not uncommonly eventuate in paroxysms of ventricular tachycardia or fibrillation and death.

Paroxysmal tachycardia: Ordinarily this is a benign disturbance of rhythm. In the patient with coronary insufficiency a rapid ventricular response to sinus stimulation can result in serious myocardial oxygen want, eventuating in myocardial infarction, even in the absence of actual coronary occlusion. It is a simple complication of post-operative periods which should be promptly detected and treated. It does not represent a contra-indication to needed surgery.

Heart block: Congenital and rheumatic varieties of auricolo-ventricular block probably have no significance with regard to contemplated surgery. The functional type (W.P.W.) variety of intraventricular conduction defect is likewise of minor importance. A-V block and bundle branch block secondary to the degenerative changes resulting from coronary insufficiency further increase the hazard in a group of patients already falling into the "poor risk class."

Anaesthesiologists as a group are well aware of the tendency for the development of arrhythmias with certain anaesthetic agents and procedures. In those patients with coronary insufficiency the need for avoiding such situations becomes clear. Massie and Valle[8] have commented upon the high incidence of arrhythmias following pneumonectomy. In patients over 35 years of age 14.3 per cent developed arrhythmias. Likewise surgery upon the heart itself is very likely to result in disturbances of

rhythm. If possible these occurrences should be anticipated, detected promptly, and treated with vigor.

MECHANICS OF EVALUATION

The procedure leading to correct cardiac evaluation and prognosis invariably entails first, the making of a diagnosis. Hence, we review what we consider a classic list of positive, almost positive, and highly suggestive evidences of organic heart disease as suggested by Harrison[9].

1. Reliable history of substantial distress appearing during exertion and disappearing with rest.
2. Enlargement of the heart.
3. Diastolic murmurs.
4. History of rheumatic fever.
5. Well marked elevation of the blood pressure.
6. Chronic auricular fibrillation.
7. Heart rate below 40.
8. Gallop rhythm.
9. A persistent and loud systolic murmur.
10. Positive electrocardiographic evidence, i.e.
    (a) Marked prolongation of A-V time.
    (b) Bundle branch block.
    (c) Certain T wave deformities.

History: Always of great value if it can be obtained with accuracy. It should be emphasized that almost one-fourth of patients with physical signs of rheumatic heart disease do not have a history of rheumatic fever. Likewise, will the history be inadequate for such serious disturbances of rhythm as bundle branch block. Need it be stated that the diagnosis of angina pectoris always rests completely within the history. Of paramount importance is careful evaluation of the patient's story regarding the ability of his heart muscle to care for his circulatory demands in such daily activities as walking up and down stairs and about his business or place of employment. White[10] long ago, in evaluating cardiac function tests, pointed out the all important feature of inquiring into the patient's reactions while undergoing "such simple exertion as enters into the routine daily life." It is just such an evaluation which the American Heart Association recommends for establishing the class into which every cardiac patient should be placed from a functional standpoint. We refer to the well known classes I, II, III, and IV. We can not minimize the importance of classifying absolutely every patient with organic disease of the heart, before attempting to make a prognosis or estimation of his or her ability to undergo any unusual ordeal such as surgery or pregnancy. The real value with this classification has not had the general acceptance amongst all physicians dealing with heart disease that it should.

Class I refers to those patients in which a diagnosis of organic heart disease has been established, but in which the history and signs of any discomfort from ordinary activity are not present.

Class II includes those patients in whom ordinary activity produces mild discomfort.

Class III includes those patients in whom less than ordinary activity produces discomfort.

Class IV includes the patients who are uncomfortable even at rest or with no activity. He is usually bedridden.

There are other factors previously mentioned which should enter into the classification of any given patient. In many cases this preliminary and even final estimation can be made upon the history and such a simple procedure as inspection.

Physical Examination: Several findings are more important than those made on direct auscultation of the heart itself. Any amount of dyspnea at rest should be considered just cause for placing a patient within Class IV, refusing insurance, delaying employment, postponing surgery, and vigorous treatment if in the midst of pregnancy. Cyanosis usually has a similar significance if its cause is properly catalogued. Moist rales at the base of the lungs, enlargement of the liver and peripheral edema are all important physical findings pointing to classes III and IV status. They do not, however, have to be permanent findings, since they may logically respond to treatment, and the patient might then go through a surgical procedure, etc., without difficulty.

Examination: We have long realized the value of a routine of procedure as taught by the late Logan Clendening[11] in examination of the cardiac patient. He suggested that if possible the patient should be seated in a chair, with sufficient clothing removed as to allow free employment of inspection. The examination began with palpation of the pulse, examination of the extremities for edema, palpation of the abdomen for fluid or enlargement of the liver, and progressed to examination of the chest. Lastly the heart was examined by palpation, percussion and auscultation. Such a routine in "reverse," as it would seem, gives all the senses so necessary to good physical diagnosis, free rein in attempting to correctly surmise the final diagnosis before the stethescope is used.

We should not omit mentioning use of the ophthalmoscope, care in taking the blood pressure, and careful evaluation of the heart tones. These are important features frequently neglected or carelessly performed.

A simple aid in cardiac evaluation, widely used, and of dubious value, is the exercise tolerance test. It was routine in military examinations to check

the pulse rate and blood pressure at rest and subsequent to exercise, i.e., as after hopping 25 times on each foot. In the military age group this examination gave some slight amount of information. With the pulse rate failing to return to the resting level within two minutes, diminished cardiac reserve might be suspected. The test has little or no value in evaluating a surgical or obstetrical risk, nor has it any standing when studying patients with coronary disease. More important than pulse rate variation is evidence of undue dyspnea or cyanosis during the procedure.

X-ray: The size and contour of the heart as determined by the six foot chest plate and fluoroscopic examination are among the most important laboratory observations of aid to the consultant. Even the presence of murmurs indicating organic disease is of minimal importance if the heart is not enlarged and has a normal contour. Such a heart will most likely be well compensated and capable of undergoing severe demands. Measurements of the heart based upon the observations of a roentgenologist are highly desirable. One must not be misled by a simple transverse position of the heart, giving the impression of hypertrophy. Fluoroscopy showing auricular hypertrophy with displacement of the esophagus, prominent pulmonary conus, dililation of the aorta, "hilar dance," and quality of the ventricular pulsation, may be important contributions.

Electrocardiogram: No examination of the patient with suspected or known heart disease is complete without an electrocardiogram. This apparatus has given a tremendous stimulus to general interest in cardiology, resulting in both good and bad. Its greatest field of usefulness, as always, remains in the accurate diagnosis of arrhythmias and in following the course of the patient with coronary thrombosis. Gradually there is accumulating information which may permit us greater latitude in interpreting certain myocardial changes from alterations in the contour of the electrocardiogram.

The incessant demand for some mechanical test giving tangible evidence of cardiac insufficiency or sufficiency has resulted in many procedures being devised. Currently popular is the oxygen deprivation test originated by Levy[12] and the "two-step" tolerance test suggested by Master[13].

Medical evaluation for retirement boards and medical survey boards in the two military branches were frequently forced into the use of one of these tests because of the demand by higher authorities for positive statements regarding cardiac status. We think no one has accepted either as being the answer to our problem, yet they do have some utility in coronary disease. Both tests are dependent upon changes in the electrocardiogram resulting from a disproportion between oxygen requirements and the supply available to the heart muscle. This condition is attained by requiring him to do a standard amount of exercise. Significant changes are depression of R.S.T. segments over 1 mm. in any lead, a change from an upright T wave to a flat or inverted T wave, or a change from a negative T wave to a positive. Widening of the Q.R.S. complex or the development of large Q waves, prolongation of the P.R. interval or heart block are also abnormal response.

Personally our experience has been with the Master "two-step" test. We consider it the safer of the two. We find it of value in attempting to make a diagnosis of coronary insufficiency in certain patients with atypical chest pain and in those suspected of having coronary disease with few or no symptoms.

CHOICE OF ANAESTHESIA

I am not so presumptuous as to suggest to a group of anaesthesiologists the exact or specific anaesthetic agent or method suitable for a given patient. Certain generalizations are appropriate. In present day anaesthesiology the part played by the anaesthesia in operative deaths of cardiac patients is probably not too important. It is difficult to evaluate the effect of anaesthetic agents upon the cardiac subject. It seems more appropriate to emphasize the importance of a competent anaesthesiologist. Various surveys of this phase of the discussion by Levine[2], Herrmann[14], Wirth[15], and Belinkoff[16] point out pertinent features of safe anaesthesia. It is worthy of emphasis that deprivation of oxygen from the myocardium is dangerous. This may inadvertently result from poor choice of anaesthesia or unusual lowering of blood pressure. Increase in irritability in the myocardium is also dangerous. Unusual excitement in the patient resulting in over production of adrenalin is likewise dangerous. This entire problem could well be illuminated by careful study on the part of the anaesthesiologist with newer techniques available for use with the electrocardiograph during surgical procedures. The only present creditable series of cases observed by electrocardiographic studies during surgery is that of Kurtz, Bennett, and Shapiro.[17]

SUMMARY

If we make the correct diagnosis of organic heart disease with all of the aids at our disposal, properly establish the correct etiological diagnosis and apply the functional classification suggested, we have gone far in our evaluation of the heart patient as a surgical risk. It seems quite clear that there is a decreasing amount of risk in surgery for the cardiac in about the following order of diagnosis: coronary thrombosis, congestive failure, coronary insufficiency, syphilitic aortitis, hypertension, auricular

fibrillation, and valvular heart disease. Once proper evaluation is established, pre-operative care, correct choice and administration of anaesthesia, and careful post-operative observation can do much toward reducing mortality.

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ACNE VULGARIS

Richard L. Sutton, Jr., M.D.*

Kansas City, Missouri

Comedones (blackheads) are masses of accumulated sebaceous matter blocking the ducts of oil glands, usually semisolid in consistency, capped at the follicular orifice with a layer of horny debris dark from oxidation. Occasionally the plugs are comparatively hard and can be expressed as firm, oat-grain-shaped, semitranslucent bodies. The face is the commonest site of the lesions, although the concha, the upper dorsal skin of the trunk, the sternal region, the scrotum, and the shaft of the penis are frequenly involved. Exceptionally the lesions may exhibit a tendency to symmetric grouping. They can be expressed and emerge from the follicular orifices as greasy, wormlike masses. There may be some associated inflammation. When inflammation is present, it characteristically includes phagocytic leucocytes and foreign body giant cells, denoting tissue reaction to comedo lipid. This inflammatory reaction is acne vulgaris. Follicular coccic inflammation resembles foreign body reaction to comedo lipid, for both are furuncle-like in configuration, but they differ in clinical course, cause and histologic structure.

Acne Vulgaris is a chronic inflammatory disorder involving the sebaceous glands, characterized by the development of shallow or deep pustules and abscesses built about and intermingled with comedones. The face is the site of predilection, although the sternal region, shoulders and back may be attacked. Lesions may occur wherever comedones may be found. The eruption is symmetric as a rule. It is usually limited to areas in which sebaceous glands are normally plentiful and well developed, but the scalp is not involved excepting occasionally at the occiput, where acne may be manifested as folliculitis keloidalis. The sebaceous glands associated with lanugo hair are the ones principally affected. The lesions usually develop rapidly and in crops, and each persists for several days or weeks. While acne papules and pustules may occur on dry skins, oily seborrhea is generally a conspicuous concomitant. The integument appears relaxed, dark, and greasy.

Acne nodules, pustules and cysts seem histologically to be foreign body granulomas with leucocytes, phagocytes and giant cells. The process may affect the superficial part of the sebaceous apparatus, so that small acuminate pustules are seen; or deeply seated oil depots may be involved, so that the clinical lesion is a deep, tender, reddish, sluggist nodule. Deep lesions may become cystic. By extension and coalescence, they may involve the conjoined deep portions of several sebaceous glands so as to form painful, boggy tumors. Intergradient types of lesions may occur in the same individual. Hyperkeratosis of the follicular orifice is a recognized feature of comedo formation[1] and perhaps this results in the accumulation of fat in the follicle. In inflammatory lesions, Lynch[2] found fat mainly in epithelial cells or in dead epithelium, but he did not attribute the inflammation to the lipid, as I do.[3] The studies of Hass[4] of tissue reaction to fatty substances are interesting and pertinent.

Superficial lesions are likely to rupture so as to discharge a more or less solid comedo or the liquid fat representative of it, along with creamy pus. Deep, indurated nodules may eventually discharge; or their soft, greasy, purulent material may undergo organization and heal; or the contents are phagocytized and carried away, or else become encysted by epithelium so that a sebaceous cyst forms; or the contents are taken up by histiocytes and firm, xanthoma-like nodules result, and these resorb only after many months have passed. What the patient does to the lesions

*Associate Professor of Dermatology and Syphilology, University of Kansas Medical School, Kansas City, Kansas.

is an additional variable factor, and neurotic excoriation may exceed the disfigurement due to acne itself.

Scarring varies greatly in different individuals. Superficial lesions give rise to little scarring, but a full-blown lesion results in sloughing out a sebaceous gland so as to leave a pitted scar. When lesions are deeply seated abscesses, there ensues more or less destruction with resultant scar formation. In the course of years disfigurement lessens, but it is permanent. Undermining and coalescence of the pathologic process affecting nearby follicles results in honeycomb lesions and bridge scars.

Clinical Variants—Acne Papulosa is the type in which there are many comedones and some papular inflammatory lesions. Acne Pustulosa is comparatively superficial but pustular. Acne Indurata is deeply seated, perhaps secondarily infected. Acne Cystica may be manifested with only a few, or perhaps many, deep, cystic lesions containing gelatinous pus. Acne Cachecticorum is characterized by large, soft, purulent, ulcerative, cystic and scarring lesions. In Acne Atrophica comedones and pustules disappear, leaving a retiform pitting and scarring like folliculitis ulerythematosa reticulata.[5] Acne Conglobata is severe acne with multiplex comedones which are confluent beneath the follicular orifices and productive of large cystic lesions and bridge scarring. It may be limited to axillary or perianal distribution and so comprise one variety of hidradenitis suppurativa.[6, 7] Infantile Acne occurs in the extremely young, especially when the nourishment includes too much cream or codliver oil.[8] The breast fed baby's mother had received bromides in the patient with pustules at birth noted by Goldsmith.[9] Miliary Acne[10] manifests numerous pinpoint to pinhead size superficial, white cysts. Tropical Acne[11, 12] affects the back especially, develops and disfigures rapidly in persons of a slightly older age group, and is apparently caused by hot wet climate. Acne Keloidalis is the type in which keloids evolve about the large, deep comedones, pustulation being comparatively mild and the lipoidal foreign substance becoming encased in dense fibrotic tissue. Acne Excoriée is the diagnosis when there is little acne and much neurotic excoriation. Symptomatic Acne (Acne Artificialis) develops from extrinsic causes. Bromide and iodide rashes resemble acne.[13] Iodized salt has been reported as a cause, as has bromine vapor. Occlusion of the follicular orifices by oils or paraffin is an etiologic factor, and is often seen among cutting tool operators,[14] electricians handling dielectric chloronaphthalenes[15] and workers in binding-twine factories.[16] Viosterol and haliver oil may cause eruptions of small acneic lesions.[17] Masculinizing adrenal tumors[18] often provoke acne, as may injections of androgen.[19]

Prognosis—Acne vulgaris is an obstinate and spontaneously scarring disorder, prone to relapse and to recur. Perseverance in good treatment is usually followed by acceptable improvement, however, and this disease, typically of adolescence, sometimes disappears spontaneously as the years go by. Niles[20] indicated that the amount of scarring in acne vulgaris is largely dependent upon the severity and duration of the disease, and is neither increased nor decreased by roentgen therapy. Treatment which prevents the development of new lesions and which curtails the suppuration of inflammatory ones, is best. Evacuation of pustules, if properly done, lessens the scars which might be expected.

Etiology and Pathology—Comedones may occur at any age, but they usually develop during the adolescent period. Factors in the production of comedones are disturbances which tend to increase the activity of the sebaceous glands. Greasy skinned individuals of the "seborrheal type" are predisposed. The epidemiologic study of Hinrichsen and Ivy[21] showed no sex preference, but acne appears a little earlier in girls in association seemingly with their earlier sex maturation. The incidence diminishes in men after 19, but clinical acne is common even after age 30.[22] This is true also of women.[23] Constipation, dyspepsia, fatiguability, anemia and menstrual derangements are frequent concomitants; these are also symptoms of hypothyroidism, a disease characterized by hyperlipemia.[24, 66] Heredity is responsible for a predisposition to acne.[25] *Corynebacterium acne* is thought by some to be the exciting cause of acne, but no one ever caught acne, and pus from the lesions is innocuous. Vaccines of *C. acnes* are worthless.[26] Exacerbations occur during intercurrent illnesses and often at the time of menstruation. Iodides make acne worse. The blood iodine levels of acne patients do not differ from those of controls.[27]

Nutritional Considerations—On a high carbohydrate diet 10 patients in hospital became better, not worse, Crawford and Swartz[28] reported. White[29] and Cormia[30] knew that some acneform eruptions depend on foods and can be cured by elimination diets. Such foods are not distinguished by skin tests. For the most part what these authors eliminated was fatty, as milk. In avitaminosis A there is a supplanting of follicular and glandular epithelium by keratinizing squamous epithelium,[31] so that follicles become plugged, secretion is diminished, and the skin is dry. Acne appears in avitaminosis A with noteworthy rarity,[32] but acne can be caused by taking fish oils to excess. Thyroid function is necessary for the metabolism of fat,[33] and in hypothyroidism, hyperlipemia is present.[34] Milk, cream, ice cream,

meat, and chocolate are the commonest fat-rich foods, and they cause comedones and acne when ingested in amounts beyond a person's metabolic capacity. The balance between the intake of lipid and its management when absorbed, dependent as its metabolism is on endocrine function, especially thyroid, is the balance which determines seborrhea and the formation of comedones, I think.[35] Cholestermia is not concerned,[36,37] but no one has studied total and fractional blood lipids quantitatively in acne. When the acne patient on a low fat diet drinks milk new lesions appear in about 36 hours, the time required for fat to be deposited and tuberculoid inflammation to develop. Lipochrome pigments are significant as well, for catsup and excessive orange juice have as bad effects as butterfat. Menagh et al.[38] found diminished carbohydrate tolerance in 70 per cent of their cases and reduced B.M.R.s in 65 per cent; they gave insulin to one group and thyroid to the other with beneficial effects for the most part, but they disregarded diets.

Endocrine Influences—The age of onset is often coincidental with sex maturation, and is statistically somewhat earlier in girls. Acne is a young persons' disease, is a "dyshormonal" dermatosis, and shows predilection for thick-skinned persons of dark pigmentation.[39] Many studies have been concerned with attempts to control acne vulgaris by the use of various hormonal substances. Without reviewing them in detail here, I believe it fair to say[40] that the results have been irregular, unsatisfactory and unpredictable. An oversupply of male sex hormone may be concerned,[41] although increase or diminution of androgen excretion was not proved in either sex by Laurence and Werthessen,[42] who did report a disturbance of androgen-estrogen ratio. Cohen[43] found no support for a hypothesis that psychiatric factors are involved in the causation of acne. He[44] observed no significant relationship between seborrhea, dandruff and acne, and there was no association with hypertrichosis.[45] He[46] noted that heavy sleeping and the lack of feeling refreshed by sleep occurred in patients of both sexes, confirming my observation[3] of symptoms I attribute to hypothyroidism, for they disappear when the correct dose of thyroid is established.

Treatment—The patient is carefully instructed to avoid traumatizing the face, which should be washed gently with soap and to which no unguent may be applied. Petrolatum on the hair gets on the face. Seborrheic dermatitis of the face, "dry skin," is simply the extension of dandruff of the scalp, which should be treated. Authorities differ[47] in their ways of trying to cure acne, there being recognized no one best way. In discussing therapy, I shall emphasize that which I judge best.

Local treatment of the comedones and pustules is delicate and exacting minuscule surgery, which must be performed by the physician, the patient being prohibited from picking at his lesions. The purpose of local treatment is to get rid of lipid depots before they provoke inflammation or with as little trauma as possible after they have done so. Traditionally one prescribes a sulfurous astringent such as "lotio alba," though its benefits are apocryphal:

℞	Phenol	1.0
	Zinc sulfate	1.2
	Sulfur, pptd	
	Sulfurated potash	2.0
	Rose water	to 180.0

A complex sulphur preparation in a penetrant wetting agent vehicle has been highly recommended.[48]

To peel the face with a powerful agent may be undertaken only under closest supervision; it is dangerous and violent and does not have lasting beneficial effects.[49,50] Ultraviolet light is temporarily helpful in mildly peeling dosage. Cryotherapy, popular, impressive and temporarily beneficial through its peeling effect,[51] is accomplished by grinding solid CO_2 in a mortar with acetone and sulphur to make a slush,[52] which is quickly swabbed over the affected parts. Its defatting and exfoliating influences are creditable, but its value in amelioration of scars is at best dubious.[53] Zugerman[54] used ethyl acetate as the vehicle and added sulfur to the refrigerant.

Roentgen therapy produces necrobiosis and atrophy of sebaceous follicles, but does not influence the cause of sebaceous hyperactivity. Roentgen therapy will not rid the dermis of embedded comedones and waxy cysts, which must be removed mechanically. It is said[55,56,57] to be reliable for improving a higher proportion of patients than any other single agent. It is generally not advised for patients under 16 years of age. Given on only one side of the face, it seemed to Kline and Gahan[58] to help both sides. It is not the sole agency for treatment,[59] but works especially effectively in conjunction with low fat diet and thyroid therapy, I find, and Cole and Driver tell me they agree with me. Exacerbation may follow its use in cystic cases. MacKee and Cipollaro[60] recommended doses of 75 r each week at 80 to 100 kv. Most patients will tolerate three or four months of this without atrophy, they stated, but after four months one must stop, and one should stop sooner if the aim has been accomplished. Fair and pustular patients may tolerate only half as much. The danger of resultant permanent injury must be continually borne in mind.

General Measures—One should discourage free sweating, for to sweat is to secrete also an increased

quantity of sebum. Adequate sleep is desirable, for chronic fatigue is certainly a harmful influence. Sexual tension is undesirable but is often unavoidable. I have seen acne disappear after marriage and have seen it reappear, along with neurotic excoriation, after divorce. Focal infection must be eliminated in some instances, for tonsillectomy may work wonders in a severe and difficult case. Tonics may be employed, such as the venerable "I.Q. and S.," or the more modern B complex pill. Marshall[61] recommended a liver extract. Riboflavin, useful in rosacea, may help here. Viosterol in doses of 20,000 to 100,000 units daily has been followed by improvement in many patients and harm in few.[62] Large doses of vitamin A were recommended by Straumfiord,[63] but Lynch and Cook[64] were unable to confirm him, nor can I. Acne is not a vitamin problem, but when vitamins are needed in any condition their administration is helpful. Penicillin by injection benefits secondarily infected and painful acne; it can at best only subtract the infectious fraction of the patient's disease. Foreign protein therapy has largely been relegated to history.

Diet and Thyroxin—Taking into account the noninfectious nature of the disorder, the greasiness of the skin and the evidence that acneic inflammation is tissue reaction to lipid, I hold it advisable to see that the patient does not take much oil in through his mouth so that he cannot put much out through his skin. I prescribe, therefore, a low fat diet, which may contain as many calories as the patient can swallow. If he ingests fewer calories than he consumes, he loses weight, for the calories he burns but has not ingested must come from his own stores of fat. Therefore a diet on which the patient loses weight is not in effect a low fat diet, and patients losing weight do not show improvement. To accomplish low fat nutrition the patient must be on a high protein, high carbohydrate diet. In designing the diet, the tables of Chatfield and Adams[65] are useful. In general foods of vegetable origin are low in lipid content, and foods of animal origin are oily.

LOW FAT DIET

General Instructions—A diet to be followed for a long time must be adequately nutritious, easy to follow and fit to eat. There is no restriction of quantity eaten. The patient is instructed *not to go hungry* and to keep a record of weight. This is not a diet for allergy, wherein 100 per cent of certain items are interdicted. "Avoided" does not mean "not any of." The following lists are given the patient:

Allowed—Fruits, cereals and bread, vegetables, sugar and sugary foods (such as syrup, honey, jelly and sugar candy), lean meats, birds, game fishes, gelatin, cottage cheese, egg white, two cups of coffee, tea or coca cola per day.

Avoided—Milk (do not drink it), cream, butter (one square per meal is all right), ice cream, cheese (like butter), gravy and salad dressing (a teaspoonful makes foods more palatable, is allowed), pork, fried things (potato chips are 35 per cent oil by weight), popcorn; any substances rich in lipochromes, which are not successfully metabolized by acneic individuals, such as tomato catsup and juice, carrot, excessive amounts of egg yolk and orange juice, and cod-liver oil.

Thyroid extract enhances lipid metabolism and regularly lowers lipemia. I consider the correct utilization of thyroid to be that of a normal person, in whom any additional thyroid is too much. I seek to dose the acne patient so that he resembles the normal in that more thyroid would be too much. The correct dose is found by experiment:[66] placing the patient on one grain U.S.P. with breakfast each morning, it is easy to discover whether this dose is too little and does nothing, too much and poisons the patient however mildly, or is just right. I am like perhaps half of all internists in disregarding the B.M.R., in which I have neither confidence nor interest. I sometimes give regard to the basal temperature,[67] obtained by holding an accurate thermometer in the mouth for 5 minutes prior to arising and reading it to the tenth of a degree. A temperature of below 97.8° F. suggests that thyroid may be increased a trifle, but at 98.2° F. overdosage symptoms are present or imminent.

The maximum tolerated dosage is *just less than* that which produces any symptom of overdosage. Symptoms of overdosage include nervous tension, insomnia and restlessness, headache, dizziness, weakness, tremor, palpitation, or continued loss of weight.

Milk is the antidote for thyroid overdose as sugar is for insulin. At the *first* appearance of any symptom of intolerance, the dose is diminished to a tolerated level. This necessitates keeping the patient under strict supervision, seeing him each week, recording his weight, inquiring of him how he tolerates the medication and making suitable adjustments of dosage.

Correctly administered, this regimen of diet and thyroid substance cannot be harmful, for enough[68, 69] vitamin A "leaks" into the diet to prevent hypovitaminosis, which I have never observed in my patients. As soon as a proper level of thyroid intake is established, seborrhea and inflammation greatly diminish. The diet is strict at first and is broadened as the disease is controlled until the patient discovers how much fatty food he can ingest without erupting. Thyroid is continued as long as it is necessary. Some

patients take it for years and relapse if they omit it; others reach a balance in a few months and become overdosed by a dose which for a time was correct.

SUMMARY

A description and review of the literature of acne vulgaris is presented, emphasizing the theory of etiology in dysfunction of fat metabolism and giving details of the treatment by means of low fat diet and thyroid. In addition to diet and thyroid, I make use of painstaking surgery, x-ray therapy after the correct dose of thyroid is established, such measures as attention to focal infection and administration of penicillin if they are indicated, and no local medication at all.

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OBSERVATIONS OF TRAUMATIC RUPTURE OF THE SPLEEN

REPORT OF A CASE*

John E. Lamy, M.D., and Frank A. Rieke, M.D.

Kansas City, Kansas

Traumatic rupture of the spleen is a more common injury than is generally appreciated, and its frequent discussion in the recent literature is probably due to two factors. First, it is doubtless increasing in frequency of occurrence due to the mounting number of abdominal injuries of traffic accidents, and secondly, it is being diagnosed more accurately.

The increase in malaria in this country since the war is a factor to remember, as the enlarged friable spleen of chronic malaria is more easily ruptured than a normal organ. It was found at the Ohio State University Hospital that one out of every 920 accident admissions of all types had rupture of the spleen, and at the Harlem Hospital in New York City this injury occurred in one out of every 666 accident cases of all kinds.

Injuries to the spleen are the most common of all subcutaneous injuries to abdominal viscera. Wright and Prigot[12] in 1939 found the incidence to be 47.6 per cent. Injuries to the liver are next in frequency. In their analysis of 30 cases, the injury occurred in persons struck by automobiles in 50 per cent, in persons riding in automobiles 16 per cent, in falls in 20 per cent. The remaining 14 per cent was accounted for by a variety of injuries. Males were affected in 76.7 per cent, females in 23.3 per cent. The age incidence was as follows:

0—10 yrs.	30%
11—20 yrs.	16.6%
21—30 yrs.	23.3%
31—40 yrs.	20%
41—50 yrs.	10%

Hamilton Bailey[1] has divided cases of rupture of the spleen into four classes:

A. Rapid shock of the patient
B. Shock and signs of rupture
C. Delayed symptoms
D. Spontaneous recovery

In regard to Class D above, many authors express the opinion that a spontaneous cure rarely if ever occurs.[2, 9, 11, 12, 13] The mortality rate for rupture of the spleen is variously estimated from 77 per cent to 100 per cent without surgery, and from 10 per cent to 25 per cent with surgery.

Injuries to the spleen are notorious for secondary hemorrhage, and cases are recorded in which severe signs of secondary hemorrhage have appeared as early as five hours or as late as several months after the initial injury. However, McIndoe,[8] who described the clinical syndrome of delayed hemorrhage in 1932, states that the minimum length of the latent period should be 48 hours to distinguish secondary hemorrhage clearly from simple slowly progressive hemorrhage that may take more than 24 hours to produce symptoms. In over half the cases the secondary hemorrhage occurs before the end of the first week, and in 80 per cent it occurs within

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two weeks. Bradley[3] reports a case with the secondary hemorrhage occurring 116 days after the initial injury, and Bailey and Schreiber[2] report a case with secondary hemorrhage occurring eight months after the injury. The ratio of delayed to immediate hemorrhage from rupture of the spleen was found by Zabinski and Harkins[13] to be one to seven.

Gillis[5] explains the delay in serious bleeding in these cases in the following ways:

1. The great omentum may insinuate itself into the tear and prevent further hemorrhage by shutting off that portion of the peritoneal cavity.
2. A rent in the spleen may be sealed temporarily by blood-clot.
3. A subcapsular hematoma may form and later burst.

During the period in which the hemorrhage is temporarily arrested by any of these methods, progressive destruction of the splenic pulp and capsule about the site of the injury will go on, and when the secondary hemorrhage takes place it is apt to be more severe than the original hemorrhage.

Roettig, Nusbaum and Curtis[11] have classified the pathology of rupture of the spleen and correlated the clinical picture with each type.

Type 1 is a complete fragmentation of the spleen into two or more parts, or a complete tearing of the spleen from its pedicle. This results in immediate massive hemorrhage and, in many instances, sudden death.

Type 2 represents a large tear at or near the hilus. This gives rise to the rapid onset of grave hemorrhage, and like Type 1 demands the most rapid surgical intervention.

Type 3 is characterized by one large or multiple smaller tears about the periphery of the spleen. This type leads to slow but steady development of the syndrome of intraabnominal hemorrhage.

Type 4 presents a solitary small tear at the periphery.

Type 5 is characterized by subcapsular hematoma.

The last two types are principally responsible for the development of the syndrome of delayed hemorrhage.

The following cases illustrate in order the correlation of the clinical and pathological findings:

Fink's[4] case was a 34-year-old man who was thrown 55 feet when the car he was driving overturned. He was picked up by an ambulance shortly after the accident but by the time he reached hospital he was dead. Autopsy showed a large amount of blood in the peritoneal cavity and the spleen had a transverse laceration extending across the entire medial surface and through the hilus. It extended on to the lateral surface at the middle of the anterior border for a distance of three centimeters.

Harkins and Zabinski[5] report the case of a patient seen 45 minutes after striking her left chest. She was in deep shock. Four hours later the spleen was removed and showed a horizontal tear almost across it.

Harkins and Zabinski[5] record the case of an eight-year-old boy who had fallen four feet, landing on his abdomen. He was watched for two days during which time his pulse rate gradually rose. At operation the spleen showed a tear across the middle extending two and one-half centimeters into the substance.

O'Brian[10] reported the case of a sailor admitted to hospital with the sudden onset of severe symptoms five days after an injury so slight that the patient was hardly aware of it. At operation a spleen was removed that showed a small laceration of the cortex, but with stripping away and destruction of a large portion of the capsule of the supero-lateral surface.

Roettig's[10] first case was a patient admitted with severe symptoms immediately after injury, but the symptoms rapidly subsided. On the eighth day he had a severe secondary hemorrhage. At operation a ruptured subcapsular splenic hematoma was found.

There is no single diagnostic criterion of rupture of the spleen. A history of an injury of the left side is usually obtained. The signs and symptoms of intraabdominal hemorrhage with shock may be present early or may develop only after a latent period. Abdominal rigidity with tenderness all over the abdomen or localized tenderness in the left upper quadrant is a frequent finding. Fixed dullness in the left flank with shifting dullness in the right flank (Ballance's sign) is found fairly often. Pain in the left shoulder tip (Kehr's sign) is found less frequently. Fluoroscopic examination sometimes shows elevation and fixation of the left half of the diaphragm, and may show separation of the gastric bubble from the diaphragm by an interval wider than usual. Wright and Prigot[12] found abdominal tap to be of invaluable aid in the diagnosis of subcutaneous injury to abdominal viscera.

The treatment of rupture of the spleen is splenectomy. Rarely is the spleen so firmly bound by adhesions that it cannot be freed. Suture, tamponade and simple ligation of the vessels are dangerous procedures. A transverse incision below the left costal margin gives excellent exposure. Delivery of the spleen into the incision is facilitated by traction on the greater curvature of the stomach downward and to the right. The pedicle should be clamped under direct visualization or severe damage to the stomach wall may be caused. (Laing[7]).

The following case report illustrates several points of interest:

The patient, a white male 37 years of age, was

admitted to St. Margaret's Hospital, Kansas City, Kansas, at 2:00 P.M. December 15, 1946, shortly after an injury to the left side incurred while riding in the front seat of an automobile that had had a head-on collision with a taxi. His chief complaints were pain in the left side and in his left ankle. He had had no previous severe illness or injury.

At the time of admission he had tenderness over the left lateral malleolus and over the fourth and ninth ribs in the mid-axillary line, tenderness in the left upper quadrant, and dullness in the left flank. His pulse was weak and the blood pressure could hardly be determined. After receiving a pint of whole blood and a pint of plasma his blood pressure rose to 70/50. X-ray examination showed a chip fracture of the left lateral malleolus and fractures in the mid-axillary line of the left fourth and ninth ribs. He vomited once during the course of the first day.

The following morning his blood pressure was 105/70 and by that evening reached 130/85. The admission blood count was RBC 3,800,000, Hemoglobin 78 per cent, Hematocrit 31 volumes per cent, WBC 9,400, Neutrophils 80 per cent, Lymphocytes 18 per cent, Monocytes 2 per cent. The following day there were RBC 3,600,000, Hemoglobin 65 per cent, Hematocrit 25 volumes per cent, WBC 8,100, Neutrophils 79 per cent, Lymphocytes 10 per cent, Monocytes 10 per cent, Eosinophils 1 per cent.

He was kept at rest in bed for the first five days. During that time the pulse rate was not over 90, the temperature occasionally rose to 99.6, and the blood pressure stayed at 130/85. There was persistent dullness in the left flank with tenderness in the left upper quadrant. He had several bouts of profuse perspiration.

On the fifth day in hospital, his hematocrit reading was 30 volumes per cent and it was decided to give him a transfusion from the blood bank. After he had taken 250 cubic centimeters of the blood, he complained of general malaise, chilly sensations. On examination he was found to be soaked with perspiration, very lethargic, with pulse of 120 and blood pressure of 90/70. At first it was felt that the change may have been due to a reaction to the transfusion. The transfusion was discontinued, and adrenal cortex one-half cubic centimeter was given, and 1000 cubic centimeters of 10 per cent glucose was started intravenously.

By the time the infusion was completed his blood pressure had risen to 110/70, but the pulse rate remained at 120. He complained of abdominal pain and pain in the left shoulder tip. There was increased dullness in the flanks, particularly on the left side.

One hour later the blood pressure had fallen to 100/78 and a pint of plasma was given. Following that the pressure rose a little, but after a few minutes fell to 85/65 with a pulse rate of 148.

The patient was moved to the operating room where a pint of plasma and a pint of blood were given during the operation. Under ether anaesthesia a wide transverse incision was made below the left costal margin. A large amount of liquid and clotted blood was found free in the peritoneal cavity. The spleen was visualized and found to be bleeding profusely. While traction was applied to the greater curvature of the stomach in a direction downward and to the right, the spleen was grasped in the hand and delivered into the wound. Under direct vision clamps were applied to the gastro splenic and lienorenal ligaments, and the spleen removed. The vasa brevia were tied, the pedicle transfixed and securely ligated. A few of the larger clots near the incision were removed and the abdomen was closed without drainage. At the completion of the operation the blood pressure was 84/64. The patient returned to his room and was given another transfusion and 1000 cubic centimeters of 10 per cent glucose, and oxygen inhalations were administered.

The following day the systolic pressure remained over 100 and on the second day after operation he was transfused. Thereafter his recovery was uneventful. He was out of bed on the fourth day. The sutures were removed on the eighth day, and he went home on the ninth day.

The spleen measures 12 x 10 x 8 centimeters. It is normal in shape. There is a laceration 2.5 centimeters in length in the mid portion of the anterior aspect of the diaphragmatic surface. This laceration is perpendicular to the main axis of the spleen. There is a large blood clot surrounding the laceration. The clot measures four centimeters in diameter and one centimeter in thickness. It shows definite clot retraction. Beneath the capsule is an area of hematoma measuring 4 x 4 x 1.5 centimeters. It is friable and breaks with moderate ease.

Microscopic report: Microscopic examination of the spleen reveals the sinusoids to be collapsed. About some of the blood vessels there is a mass of necrotic fibrin as well as some areas of apparently moderately old hemorrhage about these blood vessels. (The word "old" is used here to point out that this is not of recent origin but probably a week or more in age.)

Diagnosis: Hematoma of the spleen with delayed rupture of the capsule.

SUMMARY AND CONCLUSIONS

Traumatic rupture of the spleen is not a rare injury and it should be considered in all severe blows to the left side.

The mortality rate of ruptured spleen is high

without surgery, much lower with surgery.

Secondary hemorrhage following a latent period occurs about once in every seven incidents of immediate hemorrhage from rupture of the spleen.

An explanation is given for the delay in development of serious bleeding in these cases.

The clinical course of the patient is an indication of the location and severity of the splenic lesion.

There is no single diagnostic criterion. Awareness of the possibility of a rupture of the spleen is an important factor. Suspected cases should be observed carefully for several weeks.

X-ray is sometimes helpful in making a diagnosis of ruptured spleen. Abdominal tap has been used to establish the diagnosis of intraperitoneal hemorrhage.

Splenectomy is the operation of choice. Transfusion of a large quantity of blood is usually needed to combat shock.

A case of ruptured spleen with secondary hemorrhage successfully treated by splenectomy is reported.

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CARCINOMA OF THE PROSTATE GLAND

Malignant disease of the prostate is insidious in development. There are no pathognomic signs and obstructive symptoms may not appear until the condition is far advanced.

Prostatic carcinoma is recognizable clinically only by its physical consistency, the induration being more or less characteristic. However, early malignancy may easily escape detection by the palpating finger especially if accompanied by benign hyperplasia. Later, the induration with fixation and extension to the retrovesical space is easily recognizable. X-ray of the bony pelvis and spine and serum acid phosphatase determination give valuable information regarding metastasis.

Radical perineal prostatectomy offers the only hope of cure, but its successful application requires operation before extension or metastasis and seldom is the diagnosis established in time.

In all but these few very early cases, electroresection for the relief of urinary obstruction is the treatment of choice.

Orchidectomy or stilbestrol or both are valuable in the control of metastases and sometimes have a favorable effect on the obstructive symptoms.

Prepared by The Committee on Control of Cancer

PRESIDENT'S PAGE

The Kansas State Board of Health is composed of nine doctors of medicine, all of whom have served our Society in some important capacity, and one attorney. The director is a Kansas doctor of national prominence, a specialist in administration of public health programs. He surrounds himself with a competent staff of trained personnel, to execute the various divisions. In 1904 the total public health budget in Kansas was $3,084; today it is approximately one million dollars, of which only $80,000 is state money. It is difficult to hire 200 specially trained people to keep abreast of the rapidly expanding efforts. Then there are about 200 more, part or full time, employees out over the state.

The multiplicity of activities now sponsored by this Board is staggering. There are 15 divisions, each with director and corps, such as tuberculosis control, venereal disease control, maternal welfare, etc., for which we receive federal funds. Three years ago cancer control was added. Now come mental health to the tune of $43,000 annually and hospital construction at $900,000 annually.

Federal programs are offered to the states, directed usually by the United States Public Health Service, which we may accept or reject as we choose. They usually appear attractive and are often valuable health adjuncts. Then regulations begin to appear. Expansion is evident since every bureau must become important, measured by size, in order to perpetuate itself.

This is a brief perspective of a problem which affects every citizen, as well as every physician in the state, and is as much one of political philosophy as of management and medicine. We remember well that a Surgeon General of the United States Public Health Service once directed all public health administrators to aid passage of a program of federally controlled medicine.

Our federal tax dollars go to Washington, a few may come back. A Board of Health divorced from federal moneys and directives will be expensive or greatly reduced in scope.

We dare not, we will not, allow our health department to deteriorate. We want the best for the people of Kansas. If we can always be sure when public health ends and private health begins, management will be easier. If we can know the political philosophy concerning federal subsidies of the majority of our members we can, with your help, begin to crystallize public opinion to a proper end. Frankly, we need your help. Your suggestions will be appreciated.

L. S. Nelson

President.

EDITORIALS

Osteopaths File Action

Four Kansas osteopaths filed an action in the federal district court. The question, in the briefest possible terms, contends that the Kansas Supreme Court unjustly deprived them of liberties guaranteed under the constitution of the United States. The plaintiffs are B. L. Gleason of Larned; C. V. Moore, Medicine Lodge; O. R. Muecke, Pratt; and L. A. Moore, Herington.

From information available at present it appears that this action is a private venture. The decision will of course affect the entire osteopathic profession in this state, but apparently the Kansas Osteopathic Association is not sponsoring the case. According to the best information now available, the four men have assumed the responsibility of employing attorneys to handle this case for them. Representing them are Robert L. NeSmith, formerly a judge of the district court in Wichita and now a practicing attorney, and E. H. Hatcher of Topeka.

Newspapers have announced that the procedure is somewhat unusual in that a special three-judge federal court will sit to hear this matter. The date has been set for December 9, 1947. It is impossible to predict at this time how long the case will be in litigation, but it seems easily possible that many months will go by before the case is ultimately determined. Rumor exists to the effect that the osteopaths will take this directly to the United States Supreme Court if the decision here is not in their favor. This appears likely because the utilization of a three-man federal court is the most direct approach to the United States Supreme Court.

It is quite possible, therefore, that before the matter is concluded it could become widely discussed not only in Kansas but throughout the nation. We recommend that each member watch the newspapers for its progress and, if there are questions, the medical society will attempt to provide answers.

It should be understood that this action is not against the Kansas Medical Society or against the Kansas State Board of Medical Registration and Examination, nor is it directed against any physician. The case is filed against the governor of Kansas and against the attorney general because of the positions they occupy with reference to law enforcement. Naturally the medical society is extremely interested in the progress of this law suit and will follow the action closely. Progress will be reported from time to time in the Journal.

It is too early to predict lines along which the case will proceed, but the complaint appears to argue somewhat as follows: The Kansas Board of Osteopathic Examination is set up by law. This board approves schools of osteopathy and gives examinations which must be passed successfully before the candidate may receive a license to practice osteopathy in Kansas. The four plaintiffs claim that they studied in approved schools of osteopathy. Upon receiving his degree, each of them successfully passed the examination which was based on various subjects, including surgery, and each was given a license to practice in Kansas. Interpretations of the law under which they practice have resulted in restricting their activities, and it is those restrictions they hope to have lifted by this action. The plaintiffs state through their attorneys that such restrictions on the part of Kansas are "unreasonable, arbitrary and capricious; void as against public policy, detrimental to the public health; discriminatory, and in violation of the Fifth Amendment and Section 1 of the Fourteenth Amendment of the Constitution of the United States." We recall that the Fifth Amendment says, among other things, that no person shall be deprived of life, liberty or property without due process of law. Section 1 of the Fourteenth Amendment declares that no state shall make laws abridging the privilege of citizens of the United States nor deny any person within its jurisdiction the equal protection of the laws.

Therefore, it appears on the basis of the complaint as filed in the federal court that these four osteopaths will contend that Kansas has infringed upon liberties guaranteed them under the constitution of the United States. It is not impossible that the battle might turn on that point, involving a question of whether the state of Kansas has a right to regulate the practice of osteopathy, and even this is only another among many possibilities. It could be finally concluded in a matter of a very short time, and it could well extend over many months and involve a wide variety of intricate legal technicalities.

Emphasis on General Practice

Among activities scheduled during this winter, many Kansas physicians will note with particular interest the midwinter meeting of the American Medical Association. Between January 4 and January 8 at Cleveland there will be at least five different conventions of interest to the medical profession. There is a special conference called by the Council on Industrial Health; there is a conference of county medical society officers from all parts of the United States; there is a regional conference involving particularly the midcentral states where a program designed to bring closer cooperation be-

tween local medical societies and the A.M.A. will be presented; there will be held a midwinter meeting of the House of Delegates of the A.M.A.

And, for the first time, there will be a scientific assembly of physicians specializing in general practice. Scientific papers will be presented on subjects especially designed for those physicians who are called upon to treat a wide variety of conditions. It is in effect a second A.M.A. meeting and one which should be welcomed by a large majority of the physicians of this state. We are assured that the housing bureau can make adequate reservations for all who wish to attend and hope that a large delegation from Kansas will be present when this important organization becomes a reality.

In keeping with this national program, physicians in Kansas are already planning toward the organization of a state counterpart. Your Committee on Rural Health, being primarily interested in this subject, has accepted the responsibility of fostering such an organization in Kansas. It is anticipated that plans will not be ready for announcement until after this session of the A.M.A. but that shortly thereafter an announcement will be sent to each member of the Society. Through the cooperation of specialists in general practice on a state and federal level there will evolve a program that will be mutually beneficial not only to physicians themselves but to the many areas in this state that are still without adequate resident medical care as well as to the many persons living within those areas. The entire program is, at this time of writing, still fragmentary and undefined, but a beginning has been made and shortly after the Cleveland meeting further announcements will be sent to physicians of Kansas. In the meantime, your Committee on Rural Health will appreciate learning the names of those members from this state who plan to attend that meeting.

Investments for Doctors

An article in a recent issue of the Journal of the American Medical Association was entitled, "The Doctor Reviews His Portfolio." In that study the author, Walter J. J. Smith, associated with the National Securities and Research Corporation, observed that investments should be made for income, not speculation. He mentioned three fundamentals that must be observed if a better than average investment result is to be expected, proper selection, diversification of risk, and supervision of investments.

The average investor has neither the time nor the specialized knowledge for choice and supervision of investment funds, and the busy doctor today is no exception. In most instances his funds are not large enough for properly diversified investments or professional investment counsel.

Several methods have been developed to get around these difficulties, Mr. Smith reports, and an increasing number of persons are now purchasing shares of mutual investment companies to improve their chances of arriving at specific investment goals.

The principle of mutual investment funds is similar to insurance in that it is a pooling of risk. It offers the investor the mathematical result of cooperative investment action, in addition to a wide range of choices of stocks and bonds, diversification of selection, and the managerial skill of the professional investors who control the fund he selects.

A further study of mutual funds discloses that the number of shareholders has increased steadily since inception of the plan. Foremost among the advantages offered is the fact that the investor retains ultimate control over his money through the right to liquidate at any time, while delegating the day to day and year to year operations to competent hands. In addition, investors find by comparing results over a period of years, that these funds are more profitable than individual investments and have maintained purchasing power by increasing both income and principal, while the value of the dollar has been declining. Mutual funds appeal to the larger investor because they pay dividends from both income and capital gains. They appeal to both large and small investors because the rate of return on money invested makes saving worthwhile.

Three rules for investing in mutual funds have been formulated:

1. Invest regularly regardless of the market outlook.
2. If it is necessary to invest a substantial amount of money, do so over a period of time unless markets have just had a substantial decline and prices have stabilized.
3. In a high, rapidly rising, speculative market, liquidate low quality issues and invest in mutual fund shares.

The day to day management of investment funds presents problems of major importance, problems which the individual investor does not face. For purposes of information, however, they are listed to show the type of decisions made by those professional counselors who manage investment funds.

1. Determination of the near term and long term trends in the economic cycle and in the stock and bond markets.
2. Selection of industries with maximum appreciation possibilities and minimum risks; allocation of funds to these industries.
3. Selection of individual companies within these industries.



The weight curves represented above are to be found in actual hospital (name on request) records of 75 *consecutive* infants fed on Similac for six months or longer. Not once in this entire series of 75 cases was it necessary to change an infant's feeding because of gastro-intestinal upset.

Similarly good uniform results are constantly being obtained in the practice of many physicians who prescribe Similac routinely for infants deprived, either wholly or in part, of mother's milk.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods and Nutrition

A powdered, modified milk product especially prepared for infant feeding, made from tuberculin tested cow's milk (casein modified) from which part of the butter fat has been removed and to which has been added lactose, cocoanut oil, cocoa butter, corn oil, and olive oil. Each quart of normal dilution Similac contains approximately 400 U.S.P. units of Vitamin D, and 2500 U.S.P. units of Vitamin A as a result of the addition of fish liver oil concentrate.

SIMILAC *Similar to breast milk*

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4. Determination of the price at which an investment is worth buying.

5. Construction of a portfolio of investments that will balance the risk and opportunity factors in the market.

There is economic, political and social significance to the mutual investment fund principle. Advocates of such plans point out that they are good for the country's economic status since they provide an even flow of money into equity markets and maintain a large reservoir of capital to buy at the most advantageous times. They reduce the concentration of ownership of American industry by transferring such ownership to an increasingly broader group. They make it possible for an individual to invest small sums regularly and take advantage of the compounding of money over a period of years.

Trusteeship of funds has been known for many years. Bostonians, more than 100 years ago, turned their wealth over to trustees to transmit wealth to the next and future generations, to secure investment management, and to protect wealth against shifting fortunes. Mutual investment funds are an extension of that principle, adapted to current needs.

EXECUTIVE OFFICE

Dues and Memberships

Dues for 1948 are payable at any time but should be received, through the secretary of your county society, prior to February 1, 1948. Many questions arise each year with reference to dues and about membership. In an effort to answer the most common of these, the Journal is summarizing material from the Constitution and By-laws of the Kansas Medical Society and invites members to become familiar with the regulations covering these points.

Membership in the Kansas Medical Society cannot be obtained except through a component county society. The decision of the county society is accepted without question, except that certain requirements must be met. For instance, the member must have a degree of doctor of medicine and he must have a license issued by the Kansas State Board of Medical Registration and Examination, which license must be legally registered in his county of practice. Another possible exception might arise if a member attempted to join more than one county society. The Constitution states that he may hold membership in only one component society at a time.

The component society is charged with the responsibility of determining the applicant's eligibility before membership is voted upon. Generally speaking, the membership of the component society will consist of physicians practicing within the boundaries of the area covered by the society. There may be exceptions to this, however. A physician near the boundary of two societies might find it more convenient to affiliate with the neighboring society rather than the one in which he lives. If so, he may join with the neighboring county if both his own and the neighboring component society grant permission. A similar provision applies to physicians residing near the state lines. If all requirements for membership in Kansas have been met, a physician residing in a neighboring state may have membership in this state if consent has been obtained from the county medical society of his residence.

The council of the Kansas Medical Society has set the annual assessment of each member at the same amount it has been in the past. This is payable to the secretary of the component societies, who will then forward state dues to the Kansas Medical Society prior to February 1. Along with this the secretary shall send the roster of all members and the names of all non-affiliated doctors of medicine who have resided in that county within the past year. If these reports cannot be obtained by February 1, there is provision for the president of the Kansas Medical Society to grant a component society an extension of time up to April 1. Whenever the secretary has failed to make his annual report or to submit the dues of the members of his component society prior to the state meeting, the Constitution declares that the members of that component society shall not be eligible to participate in any business or proceedings of the society or of the House of Delegates until the requirements are met.

The above applies to the society as a unit, but it frequently happens that an individual member has not submitted his dues at the time the secretarial report is submitted. Those members shall be declared suspended and may be reinstated upon payment of the assessment during that year. If dues for any member have not been paid on December 31 for that calendar year, he shall lose his membership and shall not be reinstated except upon formal action of his component society and upon payment of all assessments in arrears.

During the summer of each year the Kansas Medical Society reports to the American Medical Association the names of members whose dues for the current year have remained unpaid. It has been the custom of the American Medical Association to write such members a letter notifying them that their names are being dropped from the roster of the A.M.A. As that is still well within the calendar year, reinstatement may be obtained through payment of dues, but should these remain unpaid after the new year, reinstatement is accomplished only upon presenting application to the component society as is required of any new member.

There are some exceptions. First is the honorary member. A component society may certify a member as an honorary member, and this will be accepted by the Kansas Medical Society if such decision is based on years of service or on other grounds acceptable to the council. An honorary member is entitled to all benefits and privileges of the Society but is exempt from the payment of assessments. A member may also be excused from the payment of assessments for certain periods, such as while he is taking graduate education and may be out of the state, provided a leave of absence is granted by the component society at the time of his departure. A prolonged illness during which the physician is unable to practice medicine is also an example of an unusual circumstance, because of which the necessity for payment of dues may be waived. Again, the notice of this fact should be received through the secretary of the component society.

In summary, then, the Kansas Medical Society looks to the component societies for the collection of assessments and for obtaining the roster of physicians. Dues from individual members should be paid to the component society rather than directly to the Kansas Medical Society. Only in this way can the records of the county society and the executive office of the state society be correlated.

A richer life . . .



. . . . . for your petit mal patients

Immediate and substantial improvement in the great majority of cases—that is the encouraging prospect offered by Tridione to thousands of children suffering from *petit mal*. Tridione has achieved an outstanding clinical record in this field. In one study, for example, Tridione was given to 166 patients suffering from *petit mal* (pyknoepilepsy), myoclonic jerks or akinetic seizures.[1] This group had received only mediocre benefits from the use of other medicaments. With Tridione *83% were definitely improved.* Thirty-one percent became free of seizures; 32% had less than one-fourth of the previous number; 20% improved to a lesser extent; 13% were unchanged; and only 4% became worse. Furthermore, in some cases the seizures *did not return* when Tridione was withdrawn. • Clinical investigations have also shown that Tridione is beneficial in certain psychomotor cases when combined with other antiepileptic therapy.[2] You may obtain Tridione in 0.3-Gm. capsules and in pleasant-tasting aqueous solution containing 0.15 Gm. per fluidrachm. Wish literature? Just drop a line to ABBOTT LABORATORIES, North Chicago, Ill.

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MEMBERS

Dr. William C. Menninger attended a meeting of the U. S. Public Health Service Psychiatric Training Committee and a meeting of the reorganization committee of the American Psychiatric Association in the East last month. In addition he delivered the three Messenger lectures at Cornell university and presided at a meeting of the Group for the Advancement of Psychiatry.

* * *

Dr. Orville R. Clark and Dr. Henry S. Blake, both of Topeka, have recently become diplomates of the American Board of Surgery.

* * *

Dr. C. W. Armstrong, Salina, recently took the examinations of the American Board of Otolaryngology and has become a diplomate of the board.

* * *

Dr. Murray C. Eddy, Hays, announces that Dr. L. E. Krause, who has been practicing in Great Bend since his release from the Navy, is to become a member of the staff of the Eddy clinic.

* * *

Dr. George Seitz, who retired two years ago after having practiced in Salina for 45 years, has opened an office in Holyrood. He does not plan to continue active practice but will maintain an office there until a younger doctor locates in Holyrood.

* * *

A campaign for funds for an addition to St. Thomas hospital, Colby, was conducted early this month under the name of "The Dr. V. C. Eddy Memorial Drive." Dr. Eddy, who died August 9, was an active member of the Kansas Medical Society.

* * *

Dr. Saul Zizmor, who has been practicing in Edna three days a week, is closing his office there to devote all his time to practice in Chetopa.

* * *

The Axtell clinic at Newton announces that Dr. Victor G. Henry, Jr., formerly of Anthony, is now doing general practice and obstetrics at the clinic.

* * *

Dr. M. J. Renner, Goodland, is the subject of a feature story in the November 25 issue of "Look" magazine. The story, entitled "The Flying Doctor," tells of Dr. Renner's trips in his own plane to care for patients as far as 300 miles away.

* * *

Dr. T. L. Foster of the Hertzler clinic, Halstead, announces that he is now assisted by Dr. William A. Nixon of Kansas City, a graduate of the University of Kansas School of Medicine.

* * *

Dr. Glenn H. Baird, director of the Division of Venereal Disease Control of the Kansas State Board of Health, presented a paper at the Venereal Disease Seminar held in Detroit, September 17. His subject was "Increasing Syphilis Reporting by Follow-up of Positive Serologic Tests for Syphilis."

* * *

Dr. W. W. Weltmer, Beloit, announces that his son, Dr. Roger Weltmer, will be associated with him in practice after the first of the year and will specialize in urology. A graduate of the University of Kansas School of Medicine, the younger Dr. Weltmer has been practicing with Dr. Ockerblad in Kansas City for the past three years.

* * *

Dr. B. E. Miller and Dr. C. C. Kerr, Council Grove, announce that Dr. Roy F. Drake, formerly of Iola, is now associated with them in practice.

* * *

Dr. R. M. Gouldner, Wichita, who has made a study of the rehabilitation of alcoholics, was guest speaker at the third anniversary meeting of the Wichita group of Alcoholics Anonymous.

* * *

Dr. T. P. Butcher of Emporia, a member of the Committee on Allied Groups, addressed the Kansas Pharmaceutical Association at its anual meeting at Salina, October 26. He spoke on the creation of good relations between physicians and pharmacists.

* * *

Dr. Merton Gill has been elected first president of the newly organized alumni association of the Menninger Foundation School of Psychiatry.

* * *

The H. L. Snyder Memorial Research Foundation announces the opening of a new research laboratory building at Winfield. The late Dr. H. L. Snyder was an active member of the Kansas Medical Society.

* * *

Dr. H. Preston Palmer and Dr. R. F. Kippenberger, Scott City, have started on the erection of a clinic building with suites for four doctors.

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Dr. Lewis L. Robbins of the Menninger Foundation addressed the Indiana State Conference of Social Work in Indianapolis last month and will go to Texas in February to speak before the Dallas Council of Social Agencies.

* * *

Dr. M. D. McComas, Jr., a member of the Republic County Medical Society, has gone to Hanover, N. H., to serve as resident surgeon at the Mary Hitchcock memorial hospital and to teach in the Dartmouth medical school.

* * *

Dr. William C. Menninger and Dr. Lewis L. Robbins, of the Menninger Foundation, have been reappointed as consultants to the surgeon general of the Army.

KANSAS PHYSICIANS' SERVICE

Medical Director Appointed

Kansas Physicians' Service is proud to announce that Dr. Edward M. Fitzgerald has accepted the position of medical director of the organization. Dr. Fitzgerald, a member of the Kansas Medical Society, began his duties with K.P.S., now to become known as Blue Shield, on November 15.

His services will be of great value in expediting the processing of claims, but of primary importance will be his responsibility in the field of professional relations. Dr. Fitzgerald, in the future, will direct that portion of the program and is ready now, as at all times in the future, to answer inquiries from any physician with reference to the operation of the plan.

Dr. Fitzgerald came to Blue Shield from Wichita, where he was clinical director of the Veterans Administration hospital and was responsible for organization of the professional staff of that institution. He was respected there for his scientific knowledge and admired for his ability by those with whom he worked and the entire medical profession of Sedgwick county.

Experience is the Best Teacher

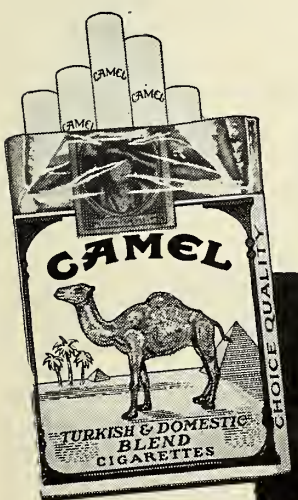
Thomas Addison
(1793-1860)
proved it in Clinical Medicine

Addison's clinical experience supported by continued research and a careful collection of cases led to his greatest discovery: the distinction between two types of anemia—pernicious in which there is no organic lesion, and the anemia in which the suprarenal capsules are diseased. The latter type of anemia is still known as Addison's disease.

Yes! And experience is the best teacher in smoking, too!

DURING the wartime cigarette shortage, people smoked—and compared—many different brands . . . any brand they could get. That's when so many people learned the big differences in cigarette quality. And, out of that experience, more and more smokers found that Camels suit them best. As a result, ***more people are smoking Camels than ever before!***

Try Camels! Let your "T-Zone"—your taste and throat—tell you why, with millions who have tried and compared, Camels are the "choice of experience."





According to a Nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

Three nationally known independent research organizations asked 113,597 doctors—in every branch of medicine—to name the cigarette they smoked. *More doctors named Camel than any other brand.*

R. J. Reynolds Tobacco Co.
Winston-Salem, N. C.

COUNTY SOCIETIES

A meeting of the Lyon County Medical Society was held November 4 at Emporia. Dr. Nathaniel Urh, assistant chief of medical service, Winter hospital, Topeka, read a paper, "Periarteritis Nodosum." Two other guests from Winter hospital were present, Dr. Rudolph Chess, chief of medical service, and Dr. Richard Landman, staff physician.

* * *

The Sedgwick County Society met November 11 at the Broadview hotel. Dr. John B. Grow, Fitzsimmons general hospital, Denver, spoke on "Indication and Importance of Open Thoracotomy in Undetermined Chest Disorders," and Dr. Harold T. Low, Pueblo, discussed the American Association of Physicians and Surgeons.

* * *

Dr. Hubert M. Floersch of the University of Kansas School of Medicine addressed the Shawnee County Society at its meeting November 3. His subject was "Amenorrhea Not Due to Pregnancy." A business session was held and the society voted to establish a blood bank.

* * *

At a meeting of the Sedgwick County Society held October 22, Dr. E. L. Mills was named vice president for 1948. Dr. J. S. Hibbard, who was vice president-elect, will become president in 1948 to take the place of the late Dr. J. E. Wolfe.

* * *

Members of the Marion County Society were hosts at a joint meeting of three county groups at Marion November 19. Dr. A. A. Fink of Lattimore laboratories, Topeka, spoke on "Erythroblastosis," and Dr. L. L. Saylor of Topeka, formerly of Marion, showed Kocachromes of the Fiji Islands and the South Pacific.

* * *

The fourth quarterly meeting of the Central Kansas Society was held December 11 at the Eddy Clinic, Hays. A paper, "The Present Status of Erythroblastosis," was presented by Dr. A. A. Fink, Topeka, and another "Antibiotics in General Medicine," was read by Dr. D. R. Bedford, Topeka.

* * *

Members of the Labette County Society and Auxiliary were guests of Dr. and Mrs. A. T. Baird, Parsons, at a buffet dinner November 19. After the dinner a business session was held and the Society elected the following officers: president, Dr. Earl Martin; vice president, Dr. M. Leon Bauman; secretary-treasurer, Dr. Charles Henderson. A symposium on cancer made up the scientific portion of the program. Dr. R. W. Urie discussed radiological aspects and Mr. Harry M. Dawdy of the Kansas Division of the American Cancer Society showed moving pictures.

* * *

The Pratt County Society met November 18 with Dr. Herbert Rinkel of Kansas City as guest speaker. His subject was "Allergies." After the scientific program members of the Auxiliary joined the group for a showing of Dr. Rinkel's color film, "Symphony of the Four Seasons."

Study Infant Formula Rooms

A committee of the American Hospital Association headed by Dr. Russell A. Nelson of Johns Hopkins is now making a study of hospital infant formula rooms and will present a complete report next year. An outline of their work, made possible through grants from the Evaporated Milk Association and Mead Johnson and Company, appears in the December issue of Hospitals.

Demands by hospital administrators, physicians, nurses and dietitians for assistance in planning infant formula room procedures that would be safe, yet simple, led to the formation of the committee. The manual to be published will include layouts and techniques to fit both large and small hospitals.

Five subcommittees are working on specific problems, evaluation of formula ingredients, physical layout and location, control procedures to test the efficiency of the formula room, general procedures and techniques, and terminal heating procedures.

Death Notices

ARTHUR T. REVELL, M.D.

Dr. Arthur T. Revell, 69, an honorary member of the Cherokee County Society, died October 25 after two weeks illness. He received his medical education at the Kansas City Medical College, graduating in 1900. He practiced first in Scammon, later moved to Columbus, and then returned to Scammon to practice there until his death. A son, Dr. Arthur J. Revell, Pittsburg, is also a member of the Kansas Medical Society.

* * *

CHARLES AUGUST DIETER, M.D.

Dr. Charles A. Dieter, 63, died October 26 at Kansas City. A graduate of the University Medical College of Kansas City, in 1913, Dr. Dieter had practiced in Harper since that time and was an active member of the Harper County Society.

* * *

TARLTON AMBROSE HOOD, M.D.

Dr. Tarlton A. Hood of Garnett, an honorary member of the Anderson County Society who had practiced there for 46 years, died November 3. He was a graduate of the Kansas Medical College, Topeka, with the class of 1897. His practice was limited to diseases of the eye, ear, nose and throat. During World War I he served in the Army Medical Corps.

* * *

JOHN HENRY LUKE, M.D.

Dr. John H. Luke, 47, Kansas City, died of lobar pneumonia November 10. Dr. Luke was graduated from the University of Kansas School of Medicine in 1928 and had been practicing in Kansas City since that time, except during World War II when he served as a captain in the medical corps. His practice was limited to obstetrics and gynecology and he was a member of the Central Association of Obstetricians and Gynecologists.

* * *

GEORGE WILLIAM BENITZ, M.D.

Dr. George W. Benitz, 68, died November 15 at his home at Wathena. He was an active member of the Doniphan County Society and at the time of his death was county coroner and health officer. He was graduated from Valparaiso (Indiana) university and was principal of American schools in San Juan, Puerto Rico, for three years before taking a medical course at Baylor, Dallas, Texas. He began practice in 1923.



DESIGN

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As Others See Us

The following article appeared in the March-April, 1947, issue of Philippine Journal of Surgery under the title of "An Asset or a Liability—A Compliment or a Reflection." It is reprinted here to let Kansas physicians know how American medical practice is viewed by practitioners in another country.

A perusal of medical literature and the accounts of returned local Fellows, visiting and student doctors in the United States, whose number has been fairly large since the cessation of the last world war, has forcibly brought home to us one feature which should especially give us plenty of food for thought and action—a differing pathology, we might say, between that which is observed locally and that which is observed in that country, a difference which cannot be accounted for by reasons of climate alone, at least directly. We refer to the increasing dearth in American clinics of those cases which are so frequently seen in the clinics at home, cases not belonging to the commonly known communicable or infectious diseases which have been largely eradicated here, but such conditions like eclampsia, breech and other abnormal presentations, chorioepithelioma, pertussis and the like, which many of our correspondents who have been used to seeing so frequently at home, tell us how rare they have become there that they become objects of curiosity and cause a flutter of excitement and commotion in the house when occasionally they are discovered. All of which is naturally due only to unusually strong and systematic preventive measures such as prenatal care, immunization and the like. They have carried preventive measures to a point where the nature of the cases to be seen with them seems to have been materially altered in recent years. Our immediate reaction to such a dearth of what we are wont to call an apparently self-complimentary feeling that is likely to stay until we wake up to realize its real meaning, that is, that they are preventable in a large sense and we simply have not done and are not doing enough to prevent their occurrence, and to that extent we are not carrying out our medical work at its highest level, which is preventive, however less spectacular might be its effects than those of curative measures in the clinic.

Each and every such case then which, being preventable yet abounds, could and should be taken as a reflection on our system, or lack of it, on our lack of vision, or distortion of vision.

A few may perhaps question if it is the part of wisdom to do that which will do away, entirely or in a great measure, with such instructive material as we have, even if only too often it leads to serious, or fatal terminations. We remember the tragic days of the battle for American reoccupation of the Philippines, with their untold casualties from bombing, shelling and shooting and their wound complications, tetanus among them, when we fairly cursed the U. S. Army for not bringing antitetanic serum with them, as if they did not know what wound complications meant. Of course they did not worry about their own troops. They were tetanus-proof, as if were, after a wonderful thoro process of mass immunization.

Nevertheless, we are told of some practices in that country the observance of which seems to be encouraged or justified only by super abundance of facilities or means for carrying them out with relative impunity and safety, which make us skeptic as to their utility and wisdom, but all in all, it fills us with admiration. At the same time we regret that such high preventive endeavors to insure health and save life as they take in some directions may be defeated or negativated by happenings in other directions, as we see in the high incidence of accidents, mostly all due to speed and to an ever increasingly industrialized civilization.

Time was, not so long ago, when many of us, while fully appreciating the need and value of antiepidemic preventive measures, which were being actively taken thruout this country during many years following American occupation in the very late nineties, did not perhaps realize what an indictment all the time it was against our sanitary sense, or lack of it. We appeared to be quite resigned to the epithet of vermin-infested Tropics, horrid as it was, with little thought that it was our duty, civic, medical and otherwise, to more actively help or lead in the conquest of the Tropics and convert them into a health resort where even denizens of temperate climates sojourning with us could stay without becoming anemic, run-down, uncomfortable, miserable and all that, whose only goal and yearning, after every so many years, was a chance to return to the "old country" for vacation and to recuperate. The Tropics was a place to lose health and vigor in.

We do not readily subscribe to the current attitude that we must not be too impatient with ourselves because ours is only a young country and we a very young people just emerging into fuller nationhood. The truth is that we believe that as far as our connection with western history is concerned, we overslept since the ancestral days of Kalipulako and Lakan Dula and beyond, and must now observe long waking and hard working hours to offset our tremendous setbacks from that centuries-long oversleeping, only attenuated perhaps by the strain and preoccupation of a hundred odd heroic uprisings.

Chicago Clinical Conference

The Chicago Medical Society will hold its fourth annual clinical conference at the Palmer House, Chicago, March 2-5, inclusive, 1948. The four-day program, to be presented by leading teachers from all over the United States, will be of interest to the general practitioner and specialist alike.

There will be morning and afternoon lectures, panel discussions, clinical pathological conferences and round table discussions, covering new methods of diagnosis and treatment. There will also be scientific and technical exhibits.

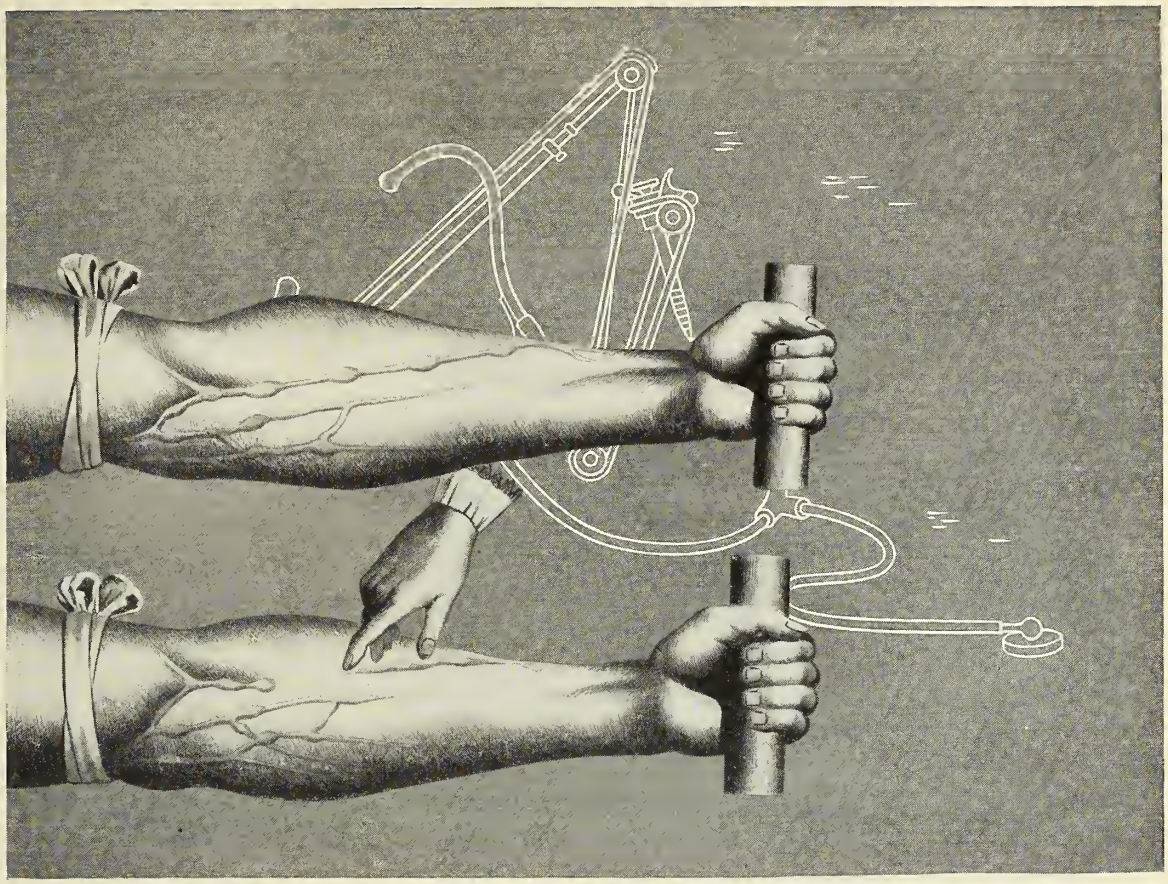
An invitation to attend is extended to all physicians. Reservations should be made direct with the Palmer House.

Stassen and National Health

"We must not be smug about our national health," says Harold E. Stassen, candidate for the Republican presidential nomination, in his new book, "Where I Stand."

"The record does not justify complacency," he states. "It is a shock to note that nearly 1,200 of the 3,070 counties of America have absolutely no recognized hospital facilities. In an additional 400 of the 3,070 counties, the hospital facilities are entirely inadequate. Hundreds of small communities do not even have a resident doctor."

The candidate opposes "a completely governmental conducted medical and hospital care program for the entire nation," as proposed in the Wagner-Murray-Dingell bill, and states that its chief liability would be that a compulsion ordinance would subordinate the medical profession to a position of working for a government agency. However, he believes that every American now on the Social Security rolls could be provided with insurance against hospital or medical expense in excess of $250 a year, and proposes that normal hospital and medical costs—those under $250 in a single year—be handled as they are now, individually and through voluntary group insurance.



The First Modern Physiology...

Medicine and Dentistry, before Harvey (1578-1657), knew little about organic *function*. But, after discovery of valves in the veins by Fabricus, his teacher at Padua, Harvey was ready for his great work.

He saw blood spurt from a snake's artery nicked *above* a ligature. When he nicked its main artery *below* a ligature, he saw no spurt of blood; and its heart swelled to bursting. He found only 4 pounds of blood in a sheep's body, but its heart was pumping out 3.5 pounds in an hour. It must *return* to the heart! It must make a *circuit!* Now a doctor could really *understand* the spread of infection and the function of major organs, and perform more intelligent surgery.

A doctor's responsibility was growing as fast as his knowledge. By 1553, he was liable for negligence, even without breach of contract. Tort law was on the way, with its newer doctrines of the doctor's liability.

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Sectional Meeting for College of Surgeons

A series of sectional meetings for fellows of the American College of Surgeons and the medical profession at large is being planned by the College for 1948. One of the conferences will be held in Oklahoma City, January 30 and 31, and another will be in Denver March 1 and 2.

Each meeting will be two days in length and will include conferences for hospital personnel as well as sessions for the medical profession. There will be luncheon meetings each day and a dinner meeting on the first evening, to be followed by a symposium on cancer. Panel discussion on scientific subjects will be led by internationally known authorities in each field of surgery.

The College, founded 35 years ago, has a fellowship of 15,500 surgeons in the United States, Canada, and other countries.

Complete information on the meetings may be secured from headquarters at 40 East Erie Street, Chicago 11, Illinois.

Magazine for Diabetics

A new publication will reach the general public in 1948 when the first issue of the A.D.A. Forecast, published under the auspices of the American Diabetes Association, is printed. The magazine will be introduced to patients first through members of the A.D.A. and through general medical groups, and will be available to subscribers at the rate of $2.00 per year. The address of the association is 1 Nevin Street, Brooklyn 17, New York.

The Forecast is designed to give the physician an additional aid in the treatment of his diabetic patient. It will serve as a monthly messenger, delivering to the patient helpful articles by authorities in the field, basic facts on diet, and feature articles. An advisory editorial board made up of A.D.A. members will pass on all material before it appears to make sure that only acceptable reading material falls into the hands of patients reached through the publication.

Influenza Virus Vaccine

The National Drug Company of Philadelphia announces the addition of influenza virus vaccine, types A and B, to its line of biological products. It is prepared from the allantoic fluid of chick embryos infected with Types A and B influenza virus, concentrated and purified by differential centrifugation. The virus is inactivated with formaldehyde and standardized by mouse protection tests. Each cc. contains equal proportions of killed Types A and B virus.

Demonstrable antibody response first appears on the eighth day after injection and attains a high level within two weeks. Duration of immunity has not been definitely determined, but may be as long as 12 to 14 months when vaccine of suitable potency is employed. Local and systemic reactions, induration, redness, chills, fever, generalized aching, may occur but usually last no longer than a day.

Before each and every prophylactic dose, all patients should be tested intradermally with 0.02 cc. of undiluted vaccine. If the test is negative or suggestive, vaccine may be given, although when reactions ensue precautions should be taken before proceeding with immunization. Patients allergic to egg proteins should not be immunized with this vaccine.

Army Offers Medical Internships

Two hundred medical internships will be offered by the Army in 1948 for a period of one year of active duty. Applications may be made by male graduates of medical schools approved by the Council on Medical Education and Hospitals of the A.M.A. who are eligible for appointment as medical officers. The rotating internships will include the following services: medicine, neuropsychiatry, pediatrics, contagious diseases, laboratory, obstetrics and gynecology, general surgery, urology, orthopedic surgery, ophthalmology and otolaryngology.

Three hundred fifty residencies in various Army general hospitals will also be available, for periods of one, two and three years. The residencies will include study on cardiology, contagion and tuberculosis, dermatology and syphilology, internal medicine, pediatrics, physical medicine, anesthesiology, obstetrics and gynecology, ophthalmology, orthopedic surgery and otolaryngology, surgery, thoracic surgery, urology, neurology, pathology, psychiatry and radiology.

Studies Egyptian Cholera Epidemic

Dr. Harry Seneca, research associate of Columbia university, recently flew to Cairo by special plane to study methods employed and to assist in the control and treatment of epidemic cholera now prevalent in the Nile valley. Dr. Seneca, who served in the Army medical department during the war, is now consultant to the Schering Corporation, which is supporting the cholera research.

The last serious outbreak of the disease in Egypt occurred in 1912. It is often fatal, and death sometimes results in a matter of hours. Dr. Seneca plans to remain in Egypt until the epidemic is successfully stemmed.

New Red Cross Medical Administrator

Dr. Frank E. Wilson, Silver Springs, Maryland, has been appointed administrator of the American Red Cross medical services to succeed the late Dr. Courtney Smith, killed in an airplane crash last June. He will be responsible for disaster medical and nursing service and employees' health service.

Dr. Wilson has done public health work in North Carolina and has also spent some time in private practice. During the war he served in the Army medical corps and was commanding officer of the 807th Hospital Center.

Congress of Ophthalmology

The third Pan American Congress of Ophthalmology will be held at the University of Havana School of Medicine, Havana, Cuba, January 4-10, 1948. More than 40 papers will be presented by ophthalmologists from this country, South America and Europe, and about 1,000 eye specialists are expected to attend.

Optical Instrument Table

In response to repeated requests for a strong, rigid, well balanced instrument table, the American Optical Company announces it has resumed production of its No. 1458 hydraulic table originally developed to support large heavy instruments used by the ophthalmic professions.

The table has an 18-inch by 20-inch top which can be elevated, rotated at will and locked in position.

Health Bills in Congress

Dr. Joseph S. Lawrence, director of the A.M.A.'s Washington office, reports that 132 bills and resolutions pertaining to health and medical practice were introduced in the last Congress. Of these, 51 were introduced in the Senate and 81 in the House. Twenty-one were accorded hearings before Senate committees and 35 before House committees. Three Senate bills, five House bills and one joint resolution passed both houses and, with one exception, became law.

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BOOK REVIEWS

Physician's Handbook. Fourth Edition. By John Warkentin, Ph.D., M.D., and Jack D. Lange, M.S., M.D. Published by University Medical Publishers, Chicago.

As stated in the preface, the purpose of this book is to summarize and coordinate diagnostic procedures and factual data which a physician needs readily available. The book consists of two parts, one on laboratory diagnosis and one on clinical procedures and facts.

In Part One the various body secretions and excretions are quite thoroughly discussed, each in a general type outline consisting of tables of normal values both for children and adults, technique on the various chemical and microscopical tests and significance of the variations in a mean normal. Concerning the kidneys and liver, functional tests and their significance are discussed.

A sub-section on mycology has been added in this edition, calling attention to the increased importance of mycotic diseases in every day practice of medicine.

The sub-section in matters related to public health includes water, milk analysis and communicable diseases. The communicable disease section is particularly complete concerning notifications of contagious disease, precautions for prevention, carriers and their care, skin rashes and their peculiarities, and a nearly complete table of etiology, transmission, incubation and isolation periods and immunity of communicable disease.

Biological therapy is discussed under the heading of 1. Prophylactic biological agents including vaccines, antitoxins, toxins, and toxoids and toxin-antitoxin; 2. Biological agents for active treatment including antisera, antitoxin and toxin.

Part Two, describing clinical procedure and facts, is introduced by a general history and physical examination outline with special outlines for neurological, cardio vascular, psychiatric, urologic, gynocological and pediatric problems. These outlines are fairly comprehensive but are intended only for a guide. One important and often overlooked point in history taking is stressed, namely the military medical history to determine potential recurrent or past diseases or conditions that may affect the individual's health since return to civilian life.

The less common diseases such as diabetes are discussed and include potential complications and preventive methods. One section on drugs is divided into several sub headings with the most important drugs in each group discussed. Other tables are given that deal with weights, measures, stains, average height and weight tables, average size of organs in adults, and a list of authorized abbreviations. A routine preoperative care has been included with suggested routine for special types of tests for GU, GI, CR, systems.

In my opinion the recent edition of this manual has been carefully compiled and is complete in essential factors. I believe this book will be accepted widely as a ready reference for so many of the individual tests and tables of values and other pertinent information so important to the busy physician.—*F.T.C.*

Books Received

Unipolar Lead Electrocardiography. By Emanuel Goldberger, M.D. Published by Lea and Febiger, Philadelphia. 182 pages, 88 illustrations. Price $4.00.

Diseases of the Nose, Throat and Ear. By William L. Ballenger, M.D., F.A.C.S., and Howard C. Ballenger, M.D., F.A.C.S., assisted by John J. Ballenger, M.D. Published by Lea and Febiger, Philadelphia. 993 pages, 597 illustrations, 16 plates in color. Price $12.50.

Surgical Disorders of the Chest. Second edition. By J. K. Donaldson, M.D., F.A.C.S. Published by Lea and Febiger, Philadelphia. 485 pages, 146 illustrations. Price $8.50.

Primer of Cardiology. By George E. Burch, M.D., F.A.C.P., and Paul Reaser, M.D. Published by Lea and Febiger, Philadelphia. 272 pages, 203 illustrations. Price $4.50.

The Foot and Ankle. Third edition. By Philip Lewin, M.D., F.A.C.S. Published by Lea and Febiger, Philadelphia. 847 pages, 389 illustrations. Price $11.00.

Ulcer, Primary Cause, Diagnosis, Treatment, Prevention. By Donald Cook, M.D. Published by Medical Center Publications, Chicago. 187 pages, 27 illustrations.

Appropriation for Heart Research

An expenditure of $10,000 for equipment for study of heart disease was recently approved by the Kansas Emergency Fund Committee, and the new instruments will be put in use at the University of Kansas Medical Center. The equipment will consist of electronic devises including a recording oscillograph, strain gauges and amplifiers. The program at the university will be directed by Dr. Paul W. Schaffer, assistant professor of surgery; Dr. Mahlon Delp, associate professor of medicine, and Dr. Paul Lorhan, associate professor of anesthesiology.

Program for General Practitioners

The program for the A.M.A.'s interim session at Cleveland, January 5-8, 1948, will be designed especially for general practitioners, with a program by the Congress on Industrial Health for physicians interested in that work.

The general scientific meeting will include the following papers: "Peptic Ulcer," Frank H. Lahey, M.D., Boston; "Recent Advances in Hematology," Carl V. Moore, M.D., St. Louis; "The Chronic Invalid," Edward L. Bortz, M.D., Philadelphia, president of the A.M.A.

Several panel discussions will also be scheduled. Those announced to date are on the care of post-hospitalized patients with cancer, the treatment of ambulatory and hospitalized diabetic patients, treatment of pathologic disturbances of adolescence, and uterine hemorrhage. A symposium on multiple injuries in automobile accidents also is planned.

Continuous Inventory Planned

The American Medical Association is planning a continuous inventory of physicians in the United States and will have preliminary work completed next summer. Through the use of IBM equipment, the Bureau of Medical Economic Research will be able to keep track of 225,000 physicians without difficulty.

Doctors will notice that the cards received from the A.M.A. for directory information have a series of rectangular holes punched on the right-hand side, with numbers above. This number, ignoring the last digit, is the new serial number which the Bureau has assigned to each living physician. It is unique and will not be given to another physician when the first one dies.

The inventory will supply almost all the information contained in the directory, and will be used for many purposes. In the event of a national emergency, the information could be made available within a very short time.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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ABSTRACTS

Demyelinating Disease of the Central Nervous System

H. Kammer and L. J. Karnosh, Cleveland Clinic Quarterly, 14:153-358, July 1947.

This is a preliminary report of a small series of patients treated by dicumerol for only a short time, and is intended to stimulate interest in the concepts of the pathology of disseminated sclerosis and in the therapeutic approach.

The authors discuss concepts of the etiology of the demyelinating process. Ferraro believes there is an analogy between the cerebral pathology of demyelinating diseases and that of cerebral anaphylaxis; in other words, it is an allergic process. Putnam believes the pathology results from a peculiar disturbance in the clotting mechanism of the blood in patients with multiple sclerosis.

Ferraro describes the following similarities and identities between the pathology of experimental cerebral allergy and the pathology of demyelinating diseases such as multiple sclerosis:

1. The demyelinating process is chiefly perivascular in both conditions.
2. Hemorrhages are a major finding in the acute processes, while a paucity of hemorrhages characterizes the chronic stages of each.
3. Degeneration and necrosis of blood vessel walls are common to both.
4. Thrombus formation occurs in the acute stage of a demyelinating disease, while experimental anaphylaxis includes all stages of thrombus formation.
5. The perivascular reaction is predominantly perivenous, although it may involve arteries and capillaries.
6. Necrosis is frequent in both processes.
7. Patchy gliosis occurs in the demyelinating process as an apparent attempt at repair, and the same process has been reported in later stages of cerebral anaphylaxis.

The authors report 12 cases, treated for only 14 to 152 days. The dose of dicumerol was adjusted to maintain prothrombin time as nearly as possible to 50 per cent of normal.

Ten of the patients expressed subjective improvement. Only two showed objective improvement; one of these regained control of the urinary bladder, and in the other, bilaterally positive Hoffman sign and sustained ankle clonus became unilateral.—*E.J.R.*

* * *

Ruptured Collateral and Cruciate Ligaments

Emil D. W. Hauser, S.G.O., 84:339, March 1947.

Serious damage to the essential ligaments of the knee constitutes a problem for which solution is not easy. The author suggests a technic employing a strip or two strips of tendon derived from the adjacent margins of the supra-patellar and infra-patellar tendons. In each instance the strip is left attached at one end and is employed to cross the lateral or medial surface of the joint, obliquely, to the appropriate condyle. Where both strips are used they cross each other near the level of the tibial plateau. Thus a transplanted tendon, passing from below the patella to the medial surface of the medial femoral condyle substitutes for a defective anterior cruciate ligament, preventing forward displacement of the tibia on the femur. Likewise, the portion of tendon taken from the quadriceps tendon and left attached to the superior border of the patella is turned down and sutured to the postero-medial border of the medial tibial condyle and thus substitutes for a defective posterior cruciate ligament, preventing posterior displacement of the tibia on the femur. The two strips of tendon crossing each other also substitute for a defective medial collateral ligament.

The technic as outlined by the author does not appear difficult and may prove worthy of further consideration in these cases.—*T.P.B.*

* * *

Venous Thrombosis and Pulmonary Embolism

Two distinct lines of approach to the problems of venous thrombosis and pulmonary embolism have developed as a result of the work of various groups in recent years. The advocates of mechanical interruption of the proximal venous channels have shown promising results which, however, are closely matched by those who employ the anticoagulants. The following subjects were presented before the Clinical Congress of The American College of Surgeons at Cleveland, Ohio, December 16 to 20, 1946, and are published in Surgery, Gynecology and Obstetrics, volume 84, number 4A, April 15, 1947.

1. Interruption of the Deep Veins of the Lower Extremities in the prevention and treatment of Thrombosis and Embolism, Arthur W. Allen, Boston, Mass.

In this paper Dr. Allen reports further statistics and conclusions of his Massachusetts General Hospital group relative to femoral vein interruption, the operation having been performed on 1,518 patients. Of these 1,060 were operated after thrombosis or infarction had occurred. Less than five per cent of these had further infarcts after the operation and most of these were of minor importance. Their indications for operation are cited as follows: prophylactic interruptions, 40 per cent; signs of thrombosis on examination of the legs, 35 per cent; and infarcts, 25 per cent. The selected site of deep vein interruption is routinely through the femoral vein just distal to the profunda femoris. They find that this level provides a high percentage of success with minimal disturbance of circulation in the leg, and the operative technic is easily performed. Bilateral operation is recommended with thrombectomy where appropriate. Interruption of the inferior vena cava is reserved for patients having repeated septic infarcts. Some use of anticoagulants is mentioned. There were no deaths and no patient lost a limb as a result of femoral vein interruption in the 1,518 patients treated.

2. Ligation of the Inferior Vena Cava in Thrombosis of the Deep Veins of the Lower Extremities, J. Ross Veal, Hugh Hudson Hussey, and Earl Barnes, Washington, D. C.

The authors report their work at Georgetown University School of Medicine and recommend that in the presence of vein thrombosis the vessel be ligated proximal to the clot at whatever level this may require and indicate that ligation of the inferior vena cava has become standard procedure. It was formerly used in pelvic thrombophlebitis and has recently been adapted to the treatment of thrombosis of the deep veins of the lower extremities. They have performed the operation in 30 cases in which thrombosis had extended above the inguinal ligament on one or both sides. Technic of operation is outlined along with postoperative measures designed to restore venous circulation. Their indications for the operation are "ascending thrombosis of the lower extremities, with pulmonary embolism, when the diseased process has reached above the inguinal ligament." No pulmonary embolism followed these ligations and in the 30 patients there were three deaths, two attributed to heart disease and one to pneumonia.

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3. The Use of Vasodilation in the Treatment of Venous Thrombosis, Alton Ochsner, New Orleans, Louisiana.

In this paper Dr. Ochsner distinguishes between thrombophlebitis (inflammatory) and phlebothrombosis. He regards the presence of the latter as indication for proximal ligation of the vein with or without thrombectomy. Thrombophlebitis with inflammation of the vein wall results in concomitant spasm of the arterioles and the rather typical phlegmasia alba dolens with its persistent sequelae lasting for years or even life as the familiar enlargement of the limb. It is in this condition, in which embolism rarely occurs, that he employs lumbar sympathetic block. The relief of the vasospasm thus obtained is accompanied by subsidence of pain and fever and disappearance of the edema and the postphlebitic sequelae are eliminated.

4. Anticoagulants in Venous Thrombosis and the Prevention of Pulmonary Embolism, Gordon Murray, Toronto, Canada.

Dr. Murray cites three groups of cases: (a) Postoperative cases—prophylactic therapy. Four hundred cases in which a high incidence of thrombosis and embolism might be expected were treated prophylactically with anticoagulant drugs. No patients developed peripheral thrombosis or embolism. (b) Patients with postoperative venous thrombosis—371 cases were treated with anticoagulant drugs. None developed pulmonary embolism and the late effects of thrombosis were less severe than in a series of control cases. (c) Patients who survived pulmonary embolism—149 cases, many in extremis, improved markedly in a few hours with respect to both massive pulmonary embolism and extensive thrombophlebitis. There were no deaths, although the usual mortality rate in such patients is about 20 per cent.

5. Anticoagulant Therapy in Thrombosis, J. Frank Jorpes, Stockholm, Sweden.

Prophylaxis: "Prophylactic treatment with anticoagulants must be restricted to cases in which the risk of a thrombosis occurring is considerable, e.g., after parturition in a patient who has had thrombosis during pregnancy, or after operations on patients who have suffered from earlier repeated thromboembolic attacks after operation, childbirth, or miscarriage." Therapy: "Anticoagulant therapy has been found fully effective in the treatment of thrombosis." The work of several Swedish groups is cited in support of this statement. In some 543 cases of thrombosis or pulmonary infarction treated non-specifically there were 16 per cent deaths. In 900 similar patients treated with anticoagulants the death rate was 0.67 per cent. Dr. Jorpes feels that early exercise and ambulation are definitely beneficial. The technic of heparin administration as employed in Sweden is outlined and the doses are somewhat larger than those used by American groups.

This reviewer gains the impression that the recent trends in this field are in the direction of increasing use of the anticoagulant drugs.—*T.P.B.*

* * *

Phosphatases

Simonds, James P. Phosphatases in Diagnosis and Treatment, Ch. Med. Soc. Bull., 50-11:185-187 (Sept. 13) 1947.

Prosphatase, an enzyme which splits the phosphate ion from the esters of phosphoric acid, is believed to be a factor in the absorption of glucose from the intestinal tract, possibly is concerned with the absorption of glucose from the glomerular filtrate in the proximal tubules. It plays a significant role in the deposition of calcium in growing bones and is thought by some to take part in pathological calcification.

It occurs as: (1) Alkaline phosphatase found in growing bone in the proximal convoluted tubules of the kidneys, in the surface mucosal epithelium of the upper small intestine, in tissues giving rise to teeth, in the granulocytes in bone marrow and blood, in the bile; (2) Acid phosphatase is most abundant in the erythrocytes and in the parenchymatous cells of the adult prostate.

Phosphatase activity is expressed in units according to Bodansky or King and Armstrong and the normal range for the two methods varies. Normal values for alkaline phosphatase by both methods vary with age (Bodansky for adults 2.0 to 3.5 and for children 5.0 to 14.; above 6.0 is abnormal for adults and above 18 is abnormal for children.) (King-Armstrong's normal adult range: 5.0 to 10. and below 3.0 or over 13.0 are abnormal. Children's normal range: 15 to 25 units.) Acid phosphatase is not influenced by age but the enzyme decreases as blood stands after withdrawal, and hemolyzed blood may give a false positive.

Osteoblastic processes increase the serum alkaline phosphatase. Most carcinomatous metastases are osteolytic, hence do not alter the alkaline phosphatase but osteoblastic bone sarcoma, and the metastases to bone from carcinomata of the lung, breast and prostate are osteoblastic, hence are usually accompanied by elevated serum alkaline phosphatase (up to eight to 25 Brodansky units.) High serum phosphatase accompanied by high blood calcium and low phosphorus is practically pathognomonic of hyperparathyroidism.

Carcinoma of the prostate that have gone beyond the glands capsule produce the only significant elevation of acid phosphatase. Since the osseous metastases are osteoblastic alkaline phosphatase is also increased. In highly undifferentiated prostatic carcinomata there may be normal serum and acid phosphatase since only the adult differentiated cell produces acid phosphatase. Estrogens, castration, phostatectomy and intensive radiation depress the formation or activity of serum acid phosphatase. "Serum acid and alkaline phosphatases are an essential part of the study, diagnosis and prognosis of cases of carcinoma of the prostate."—*P.W.M.*

* * *

Infections in the Premature

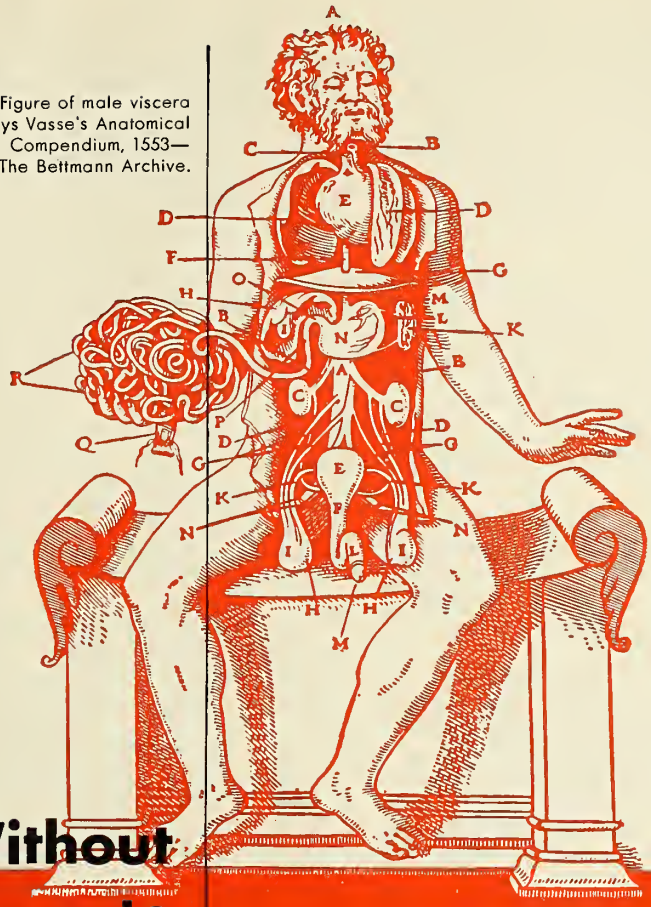
Hess, J. H. Prevention and Control of Infections in the Premature. Am. J. Dis. Chld., 73:696-705 (June) 1947

Premature delivery should be anticipated with adequate preparation. Premature births by law are reported to the Board of Health by telephone as soon as delivered, with written confirmation within 24 hours. The minimum provision for the care of premature infants is as outlined:

(1) Room adjacent to the nursery proper set aside for such infants. (2) A separate room to provide for isolation care. (3) Transfer of the infants to the larger nursery as they more nearly approach maturity, to prepare them for graduation so that they may become accustomed to a lower room temperature. (4) At least one nurse experienced in the care and feeding of the premature infant on duty during each of the eight-hour periods.

A pediatrician should be in charge of the premature station and have responsibility for the over-all conduct of the station. A dependable, intelligent, well trained nurse is in charge during each eight hour shift. Nursing personnel must be impressed with the fact that the responsibility for the occurrence of infections in the nursery rests largely with them.

Much better results were obtained when germicidal irradiation through lights placed above the open end of the cubicles threw a vertical curtain of light across the entrance. The cubicles with barrier light curtains are so de-



Anatomy: Figure of male viscera from Loys Vasse's Anatomical Compendium, 1553— Courtesy, The Bettmann Archive.

Without accurate knowledge...

of human anatomy and physiology, without stethoscope or electrocardiograph, it is small wonder that physicians of the 16th Century were helpless before many of the conditions for which present day medicine possesses efficient treatment.

Present day knowledge of the anatomy and physiology of the heart and respiratory tract has led to the widespread use of

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to increase the cardiac output, stimulate diuresis, relax bronchial musculature in such conditions as congestive heart failure, paroxysmal dyspnea and bronchial asthma.

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signed that only a harmless fraction of the rays reaches the corner of the cubicle where the head of the infant is exposed. In the presence of irradiation the nurses' eyes were protected by head shields and goggles.

An appreciable reduction in the number of respiratory infections as compared with those units in which air conditioning alone was used resulted. In units with the vertical curtain at the entrance 0.3 respiratory infection of infants per year was experienced. The cross infections were less than one twentieth of the number in air conditioned control units without irradiation.

Impetigo was treated by intramuscular penicillin, isolations until lesions healed. Each vessicle was opened and 10 per cent silver nitrate applied locally. The lesions were exposed to the open air and ultra violet radiation.

Infections of the intestinal tract were isolated until the diagnosis was determined and adequately treated.

Pneumonia was usually following aspiration or part of a general septic infection during the first few days of life. Temperature was of no value. Penicillin or sulfa was used, with adequate general supportive treatment.

From what has been stated covering care of the premature infant, it must be realized that there is offered a field for practical and specific use of the more recent advances in hospital technics, engineering, physiology and serology, and biochemical and antibiotic therapy.—*D.R.D.*

Opposes Retiring All Aged Workers

In noting the shift of our population toward the older group, Dr. Theodore G. Klumpp, president of Winthrop-Stearns, Inc., in an address before the annual meeting of the New Haven Medical Society, October 23, warned of a severe economic crisis ahead and foresaw compulsory retirement of all workers 45 years of age or older by 1980 if present trends continue. He advocated abandonment of compulsory retirement on a calendar age basis.

"We cannot persist in dumping workers in the 'old age boneyard' when they reach a fixed age," he said. "Today 33.3 per cent of our population is over 45 years of age. It has been conservatively estimated that we will have not less than 150 million people by 1980. This means that by that time there will be 81 million persons 45 years and over.... In less than 33 years we shall have more individuals over 45 than the total number employed at present."

Dr. Klumpp emphasized that he was not advocating that the normal aspirations of youth for advancement in society be frustrated in favor of retaining aged employees. He suggested that opportunities for down grading in position and salary should be offered the aging worker, just as the young apprentice works himself up in skill. Retirement, like hiring, should be selective and based on fitness to do a given job, and compulsive retirement should be based on the recommendation of a retirement board composed of medical and psychiatric members as well as administrative officials.

"Certainly Bernard Baruch, 77 years of age, Serge Koussevitsky, 73, Arturo Toscanini, age 80, Herbert Hoover, at 73, and Nicolas Murray Butler, at 85, are no obstacles in the path of progress," he said. "And neither Senator Pepper, Henry Wallace, nor Tommy Manville have become more conservative as they have grown older." These illustrations he presented in refuting a charge that advanced age was synonymous with over-conservatism and stultification of progress.

ANNOUNCEMENTS

January 5-8—Midwinter Meeting, House of Delegates, American Medical Association, Cleveland, Ohio.

January 7-8—Scientific Session for General Practitioners, American Medical Association, Cleveland, Ohio.

April 19-23, 1948—Twenty-ninth annual session, American College of Physicians, Civic Auditorium, San Francisco, California.

May 6-8, 1948—Annual Meeting, American Association for the Study of Goiter, King Edward Hotel, Toronto, Canada.

MAY 10-13—ANNUAL MEETING, KANSAS MEDICAL SOCIETY, WICHITA, KANSAS.

CLASSIFIED ADVERTISEMENTS

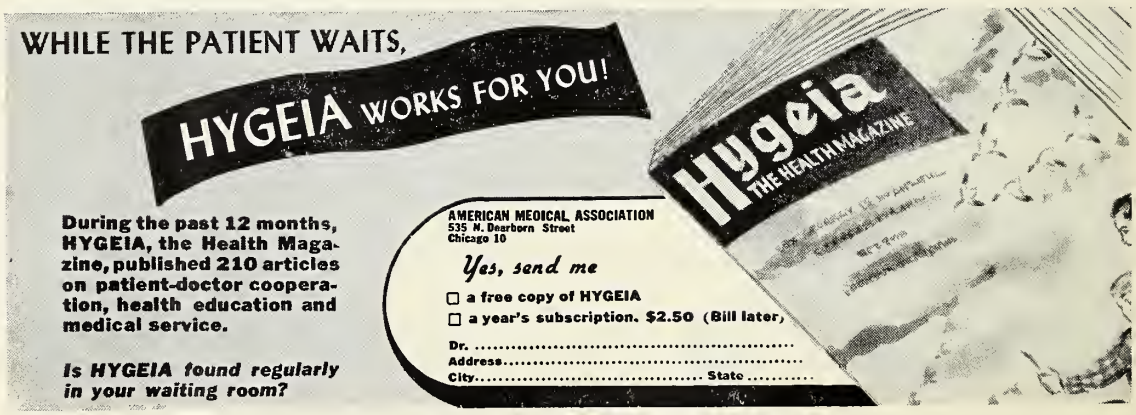
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